

Special Features This Issue
"John Gardner Small Craft Workshop"
"Forest to Sea" - "Cruising Electro-Sailer"



messing about in **BOATS**

Volume 21 - Number 6

August 1, 2003



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Commentary...

Bob Hicks, Editor



This issue features another of my annual reports on the John Gardner Small Craft Workshop held each June at Mystic Seaport in Mystic, Connecticut. It's been over 20 years since we first attended the event, but its timeless nature seems to persevere. With this in mind, I thought I'd bring you on this page some of my comments on the 1983 event 20 years ago, a scant month after we had begun publishing the magazine:

"The camel's nose is in the tent. Hi tech is appearing amongst the traditional at the annual June Mystic Small Craft Workshop. Sails like wings on airfoil masts. Articulated stainless steel centerboards. Skinny spars with black lines of carbon fiber embedded in them. Fiberglass and carbon fiber oars that look like they're made from plastic pipe but work ever so well. Traditional style pulling boats with mechanical sliding seats installed, and laps glued together with resin so they'll never leak. I can go on, but the point is made. At the annual gathering of the true to tradition types, things are changing.

This reflects, in my view, the fact that the world of small oar and wind powered watercraft is rapidly evolving and the Mystic people feel it appropriate to stay up with the trends, an open mind about watercraft built to traditional concepts but with modern materials and techniques. There certainly was a good turnout, so I guess the people out there don't mind. And, if anyone did, well, John Gardner was over in the Gray Boatshed building a peapod, and Delaware Tuckups were under construction in the White Boatshed.

Mystic is the boats, the close to 100 privately owned traditional boats that individuals bring each June to enjoy and to allow others of like mind to enjoy. Permitting strangers to take out one's treasured boat takes some generosity and yet it is routine. For the more complex craft, or delicate, owners will provide rides for interested participants. As the two day weekend's activities unfold, no matter what else is going on, there are always boats out on the river sailing and rowing about, and people on the floats looking at and talking about the boats.

The range this year was from tiny Rob Roy canoe to a popular Kingston Lobster boat, sailing and paddling canoes, kayaks, dories, Whitehalls, peapods, and a few spe-

cialty craft such as Doug Martin's *Mocking Gull*, Peter Dreissegacker's and Ken Basset's modular multiple sliding seat cruising craft, a Labrador coastal rowing boat."

Doug Martin. Doug is still at it designing innovative craft, his latest is featured in this issue's mid-section. Be sure to have a look at it. Here's what I had to say about him at Mystic 20 years ago:

"Doug Martin certainly an innovative thinker, his *Mocking Gull* is a sort of floating laboratory for his ideas. Doug had three sail setups to show us, two were modifications of Chinese lugsails, the third was a wingsail mounted on an airfoil mast. And he had an untried jib mounted on a batten which he later tested on the water. All these rigs fit onto a stub mast mounted in the maststep of the boat, itself a long, narrow elegantly lined lapstrake hull. And the rudder is also a laboratory affair, there's a trunk much like a daggerboard trunk near the back of the boat and Doug has several alternative rudders he can drop into place. His main present choice seemed to be a sort of forward angling airfoil affair.

Later in the weekend Doug was on the water in this boat, and in the good breezes of Sunday afternoon his rocket acceleration and high speed approaches to the float followed by sudden turns and stops left onlookers gasping at the versatility of this craft."

A nostalgic look back like this reveals mostly, however, that the people who were doing their thing 20 years ago are no longer turning up. Some I mentioned in my story are gone on to parts/interests unknown, a few others are still in the small boat trade somewhere but no longer keeping in touch.

As I reread the July 15, 1983 issue, my own personal memory banks were nudged by one of the photos. We were out sailing in the Kingston lobster boat and here was Jane and friend Bonnie Ginger, obviously enjoying the experience. Twenty years later, Jane was again with me on my visit after a number of years during which she could not come due to her seasonal greenhouse business demands. But Bonnie no longer comes with husband Ron, as so many others with whom we became close friends no longer do. We miss them all, it's no longer the same as it once was.

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On the Cover...

It was once again John Gardner Small Craft Workshop time in early June and once again we drove on down to Mystic, Connecticut to savor the occasion and bring you a look at some of the small craft to be seen and tried this year.

"It pretty much spoils you
for any other rowing
boat."

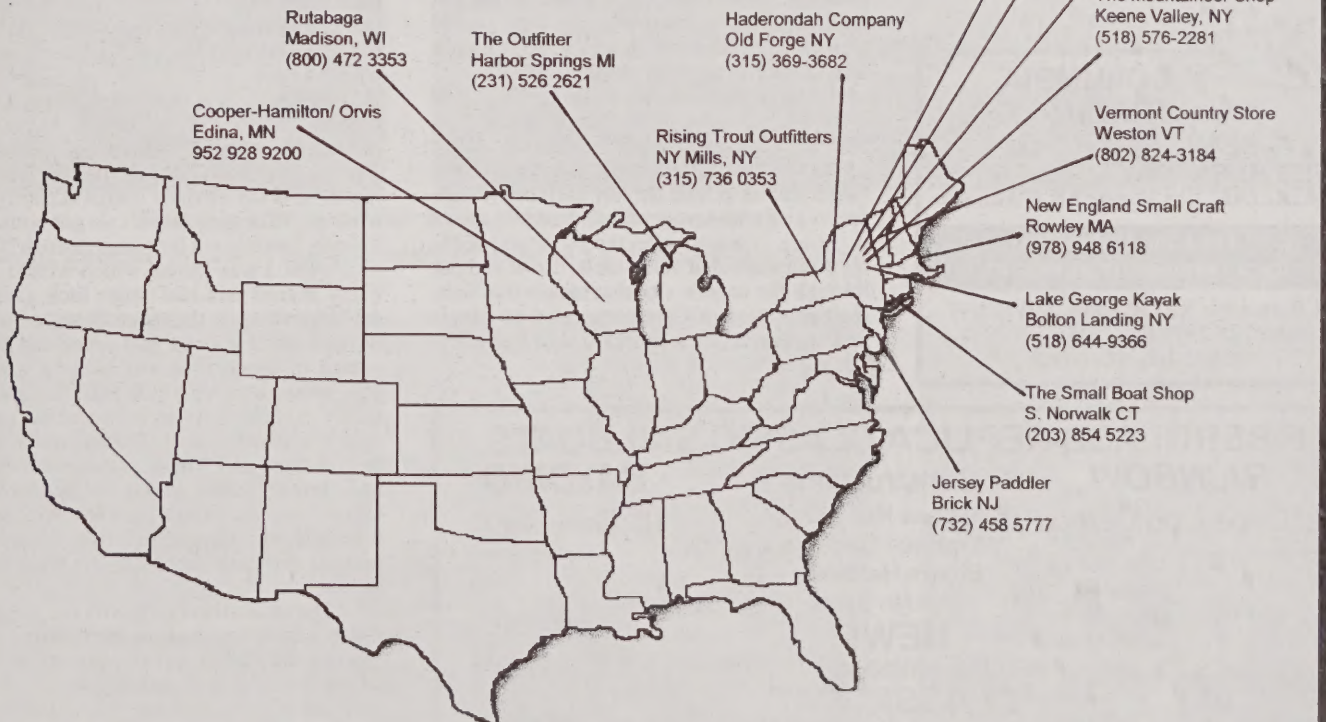
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the surface. I disturb several diving
cormorants. I am transfixed. I am in
touch. I am human. Great stuff.
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Tom Peters, *Forbes*



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Years after the millpond and tidal river experiences, having decided on a career of riding horses professionally, I went to England for training. The years in between had me sailing and occasionally canoeing, but for some reason oars and I had parted company.

England experienced by a New Englander is both poignantly foreign and starkly familiar. London is just a bigger, older Boston, complete with its fragmented neighborhoods. Can there be that much difference in the accents of Dorchester and Liverpool? There might be, but in the context of each city, no, not that much. Being a Beatles fan, of course, I took a bus tour of the city of their birth. I saw the dirty Mersey River with its grim and grimy boat traffic. A disillusioning excursion and one that almost cost me a wonderful day on the upper Thames. Having wasted tightly guarded funds on the Liverpool trip, when I was invited to have a weekend with a family friend's cousin, if I could get myself to Stratford, I almost said no.

Britain in the late '60s still had a working railway scheme. Trains took you everywhere, safely and fairly quickly. The train taking me out to school in Somerset wound through the storybook countryside of southwestern Britain. Rural and agrarian, there wasn't a boat in sight until we reached the coast at Minehead and Porlockweir. There the



Window on the Water

By Chris Kaiser

Row Your Boat

Part II

small seine fishing fleet docked and dozens of dory-like craft rested on the cobbled beach. While not quite Rockport or Beverly Cove, it made my spirits lift to know the ocean was close at hand.

School was wonderful and interesting, but in the end a disappointment when a small accident aggravated a serious back problem incurred the previous year. Left unable to ride and jump, I started to explore the area. One locale was Lyncombe Bay, the site of one evening's pub crawl. I'd received an invitation to come out boating with a group of students home from college.

As you come upon Lyncombe from the north you are traversing high rolling dales and moorlands. Up on the heights the old Beacons still stand, signal posts across an ancient landscape where their blazing fires would alert the defenders of an attack. All thought of waterborne travel is absent.

The wind, even on a warm bright day, is insistent, worrying at your heels like a Border collie. The car reaches the top of the moor to plunge down the asphalt ski jump. Tight twists and turns hide the bay until rounding a precarious corner several hundred feet above the town. I wasn't affected by agoraphobia then and marveled at the view, down and out through the narrow slot that makes this fishing town famous. Commemorated on trivets and tea cozies, each postcard sold had a few odd round boats in the picture.

If I met Kurt and sat in the darkened Brattle Theater watching the silent film, *Man of Inishmore*, about the West Coast of Ireland at that time, I'd have known these as Coracles. Having only the vaguest memory of the bull boats shown in George Catlin's frontier paintings of the native boats crossing rivers, I was surprised to see them being used as "real" transportation. (Mystic Seaport has a few in their fleet and will instruct you on the fine points of sculling.)

A freckled-faced boy was assigned to me as companion. His little brother along for the day of "winkling" made it not so much of a date as a cultural exchange. The girl who'd invited me took the lunch and jug of ever present Scrumpy in her boat with her date. We loaded from the stone quay and rowed out to the mouth of the harbor to a shingled beach. The tide was falling, so my companion had an easy time rowing. The expression "time and tide" comes to mind. The boat ahead was a retired lighter, long and lean but fairly beamy. Memory is dimmed but I think she had a wineglass stern. Our craft was more dory-like, taller sides, with thole pins rather than oar locks. The little brother wanted to row and had to stand up to do so, or chose to stand up. I know the lobstermen in Lane's Cove used to stand to row.

We had a quick trip out to the rocks where an unsuspecting lunch was being exposed. Being this close to the Cornish coast, a lot of regional boundaries get blurred, particularly in cooking. I had been told to wear my Wellies, the tall green barn boots that are now a suburban fashion statement. I was let off on a large flat boulder and the boys backed off to toss the anchor stone over 30' away. They then waded ashore standing on submerged stepping stones. Horses figured more than boats in my life, so I was ignorant of tide charts and rates of rise or fall. When we left the boats were high and dry at the water's edge.

The activity so far struck me as a bit arcane and odd, but I was outside on the water and had no schedule to keep, so I shut up and absorbed the good-natured teasing. The teasing arose at my obvious horror at eating periwinkles. "Cor girl, 'aven't ye got winkles in Bostun, 'yer known fer clams an such?!" And so it went, I was shown which wrinkle was a likely morsel and had better luck gathering the larger limpets than they thought I would. Several other groups had come out to this stretch of beach so it was likely a weekend day. When we had a full pail of "snips an snails" a small fire was built and the can put over it with a bottle of beer and onion added to boil them in. Thank goodness they also had a box of Pasties, a hunk of Cheddar Gorge Cheese, and the cider. I ate a few winkles and a couple of limpets, but like escargot, it seemed the same texture as chewing rubber bands.

The return trip I rode with the girl as she and her fella had had an argument. I got to row as she called out the directions as to which side I was to pull harder on. She finally gave up and yelled "right or left" oar. Her parting comment was, "stick to the 'orses, Chris, 'yer neffer gona make it on the water." It was to be the second time I reconsidered going up the Thames.

I walk past the periwinkles here at home and whisper to them, "You're safe, I don't want to have you for lunch."

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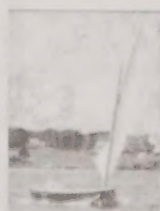
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34th Annual John Gardner Small Craft Workshop

By Bob Hicks



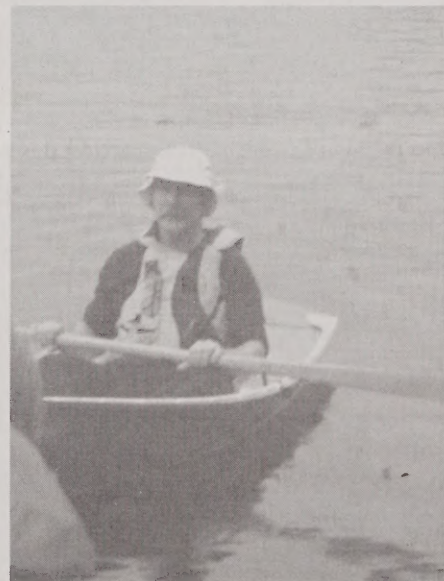
On the dock and on the beach, the small craft were there to be tried by anyone interested, the owners/builders generously sharing their craft with potential new owners/builders. As the annual invitation to the workshop states, "Let's use the boats." And so they did, herewith a random sampling of some of the ongoing action afloat.



Sharpie and dory under sail, not much breeze made for meditative sailing.

Wondering about that freeboard? The calm conditions made for a good day for such mini size craft.

It's a smallish skiff, but there are those who love them.





Bart Hawthaway is no longer with us, but his handiwork lives on in the hands of devoted owners.



A gorgeous strip built kayak with inlaid contrasting wood deck decor.



Ah, the pleasures of a leisurely row.

Just the right amount of dock space for this lapstrake skiff.



It's not always been known as the "John Gardner" Small Craft Workshop, in its earlier years under John's direction it was the "Traditional" Small Craft Workshop. Since John has passed away, his name has been added in his memory, for it was all his doing back in 1970, rallying the troops when it appeared that the Coast Guard might regulate traditional boats off the water as they would not meet the bureaucratic mind's concept of stability afloat.

But it has been ongoing 34 years now, and we have been to about 20 since our first in 1978. A whole generation has grown up and many of the kids from back then are back today with their kids. And for a moment we sorrowfully contemplate the absence of others who were, like John, well along in years when this all began. Then there are others who once were always there who have moved on to other interests and no longer appear at this annual small craft spring rite.

The workshop has gone through cycles of waxing and waning over all those years, and in recent years it appears to be on the waxing side with growing enthusiasm for the whole concept evident, despite increasing costs to participate. The number of boats this year was down a bit from last year, but in one way this made it easier for those wishing to try them out, with more dock space accessible and the beach not four deep in canoes, kayaks, and small skiffs.

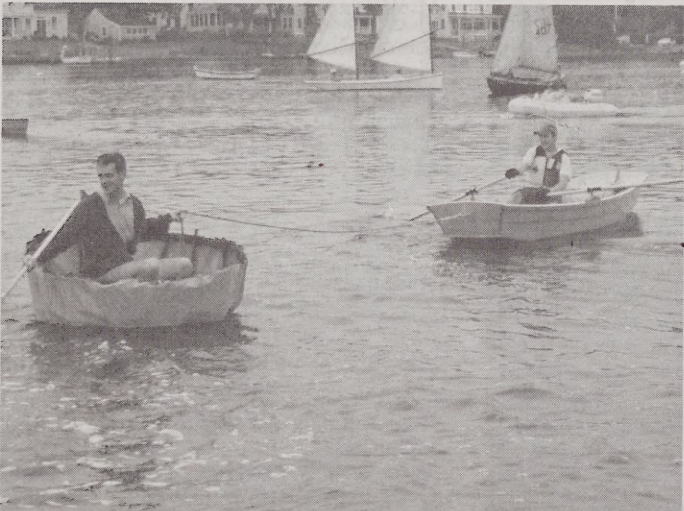
It was a gray Saturday with a light drizzle setting in late morning and gradually becoming heavier as the afternoon progressed. The drizzle was accompanied by little or no breeze, so the sailors were hard pressed to find air for their sails. But none of this seemed to get in the way of trying the boats. By late afternoon when the heavy downpours began, everyone was pretty much off the water for the day.

Up on the dock, the true scale of Walter Baetjer's *Sandy* can be appreciated.



The Coracle

Because it is so non-boaty in appearance, sort of Biblical even, the coracle always gets attention. This one was first spotted over the owner's head moving down the dock, acting as an umbrella in the steady drizzle. It was soon inverted into its proper relationship with water, and later on engaged in a tug o' war with a skiff. Despite the obvious churning up of water under the sculling paddle, the coracle could not hold its own against a pair of oars.



Kids Only Workshop

This workshop, which involved building and launching a real full size boat resulted in more than one might have thought possible from a pickup crew of kids working under Mystic staff direction. The chosen design, a paddle wheel propelled pram, came out rather nicely and was ready for launching mid-afternoon, and the kids who built it threw themselves enthusiastically into getting out on the water in it. Most displayed quick adaptability to operating the individual hand cranks used to rotate the paddle wheels.

In addition to propelling the boat, the paddle wheels, by varying their respective rpms and direction (forward or backward), also controlled the direction in which the boat travelled. For the student of marine propulsion systems, it was illustrative of why screw propulsion, when it came into use, soon supplanted the paddle wheel.





Gallery

Fulica

Owner: Philip Kendrick, S.Berwick, ME
 Type: Modified sharpie gaff sloop
 Designer: Philip Kendrick '95-'97
 Plans: Self modelled from Chapelle's
American Small Craft
 Builder: Dale Cottrell, Northport, ME '01-'02
 Propulsion: Sail, gaff rig
 Dimensions: LOA 15'1", Beam 5'5", Draft 9" (2'6" board down)
 Construction: Plywood plank on frame V bottom, centerboard



Dylan

Owner: Mike Wick, Moorestown, NJ
 Type: MacGregor decked canoe
 Designer: Ian Oughtred
 Plans: *WoodenBoat* Magazine
 Builder: Tony Dias, 1988
 Propulsion: Double paddle & sail, balanced lug ketch rig
 Dimensions: LOA 17', Beam 2'6", Draft 6" (2'6" board down)
 Construction: Lapstrake



No Name

Owner: Randy & Kristofer Levesque, Columbia, CT
 Type: Pram bowed skiff
 Designer: Walter Ansel, 2002
 Plans: *Mystic Seaport*
 Builder: Owner, 2002
 Propulsion: Oars
 Dimensions: LOA 12'6", Beam 4'
 Construction: Cross planked bottom



Foxpaw

Owner: Stephen M. Weld, Jr., Milton, MA
 Type: Double ended rowboat
 Designer: I. DeLapp
 Plans: Designer, *TSCA Ash Breeze*
 Builder: J. Brooks, Mt. Desert, ME, 1992
 Propulsion: Oars
 Dimensions: LOA 15'6", Beam 3'6"
 Construction: Plywood lapstrake, no frames

Cloe

Owner: Douglass Oeller, Germantown, MD
Type: Swampscott dory
Designer: Unknown
Plans: Mystic Seaport
Builder: Hugh McLean, Halifax Maritime Museum, Nova Scotia, 1997
Propulsion: Oar or sail, 85sf balanced lug
Dimensions: LOA 17', Beam 4', Draft 4"
Construction: Pine planking, spruce knees, oak transom, copper & bronze fastened.



No Name

Owner: Myron Young, Laurel, NY
Type: Double paddle canoe/kayak
Designer: Unknown, 1900?
Plans: Mystic Seaport
Builder: Owner, 2002
Propulsion: Double paddle
Dimensions: LOA 16'9", Beam 28", Draft 6"
Construction: Strip planked



Sandy

Owner: Walter Baetjer, Portsmouth, RI
Type: Miniature flat iron skiff
Designer: Owner, 2001-2
Plans: Fleetwood Marine (not yet available)
Builder: Owner, 2003
Propulsion: Oars
Dimensions: LOA 7'6", Beam 34", Draft 3" scaled to 6 year old sons
Construction: Marine ply & epoxy, taped seam



Thomas Eakins

Owner: Pete Peters, Washington, PA
Type: Delaware Ducker
Designer: Unknown
Plans: Mystic Seaport
Builder: Workshop on the Water, Philadelphia, PA, 1995
Propulsion: Row, pole, sail, gaff rig
Dimensions: LOA 15', beam 50", Draft 6"
Construction: Glued lap plywood





No Name

Owner: Ian H. Manley, Acushnet, MA
 Type: Minimal skiff
 Designer: Unknown, 2001
 Plans: Internet, Yahoo groups
 Builder: I. Danielan Manley, Acushnet, MA, 2002
 Propulsion: Paddle
 Dimensions: LOA 8', Beam 30", Draft 6"
 Construction: Boxy, slight vee bottom



Imp

Owner: Hudson Baxter, Hyannis, MA
 Type: Culler Good Little Skiff, 2/3rds size
 Designer: Pete Culler, 1972
 Plans: Mystic Seaport
 Builder: Owner, 2003
 Propulsion: Oars
 Dimensions: LOA 8'6"
 Construction: Plywood & fir, epoxy fastened



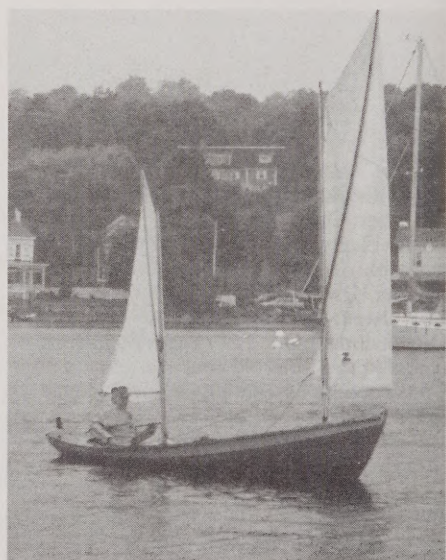
No Name

Owner: Gail Ferris, Stony Creek, CT
 Type: Aleut baidarka
 Designer: Traditional Aleut design
 Plans: George Dyson
 Builder: Dan O'Connell, Glastonbury, CT, 1990
 Propulsion: Double paddle
 Dimensions: LOA 19', Beam 19", Draft 1"
 Construction: Aluminum frame, heat shrink nylon covered

The Ideal Small Craft

A thread that runs through the lives of many of us pursuing our interest in small craft is the search for the ideal boat. Watching Kevin Rathbone paddling his ketch rigged craft out from the dock area to where there was a tiny breeze, and then settling back in the stern sheets to let that breeze take over, I felt I was viewing one of us who has long since

achieved his goal. As far back as I can remember, Kevin has been at the Mystic workshop every year with this wonderfully graceful boat, a melding of man and boat resulting from long years together.



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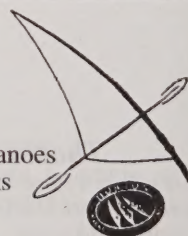
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The sails were furled, the anchor ready. There was nothing to do but wait and worry as the blackest sky I'd ever seen on the water advanced slowly on our becalmed Thistle class sailboat, *Pursuit*. My son, Tim, then 11, and I were on a three-day, two-night cruise down the Potomac River from Washington to Westmoreland State Park, about 85 miles downriver. The weather was unsettled, showers, thunderstorms, and light winds were forecast, but the family schedule said it was now or never, so there we were.

My concerns about the weather and the usual pre-voyage jitters evidenced themselves at launch at the Washington Sailing Marina the day before, when I nearly broke off the centerboard when it somehow lowered itself between two planks at the hoist I used all the time. Once underway, however, we had a slow but pleasant sail past Mount Vernon and Ft. Washington and anchored for the night up Mattawoman Creek, about 30 miles downriver, where we swam, ate precooked dinner, and spent a reasonably comfortable night marred only by some noisy motorboats and their inebriated occupants.

The morning was still and ominous, humid and cool. Showers came early with just enough wind to move out of the creek and into the Potomac's current. For most of the day we drifted and battled for every mile. The Potomac is tidal to Washington, so we couldn't just drift. Between bends in the river, fitful wind, blazing hazy sun, and contrary current, it was a wonder we got as far as we did that second day before the storm. We actually covered about 44 miles, half the total, counting side trips up creeks.

Our progress was due to the sail area of the Thistle and our light load, plus my inability to concentrate in light air. A Thistle is 17' and beamy, with a very large main, modest jib, and a normal crew of three. It is a good light air boat, but would have been very difficult for my son and I to handle in strong winds, even with a reef in.

We would have been better off had we not gotten so far. Our wait for the black sky happened just below the U.S. Route 301 bridge, the last across the Potomac and located at a point before the already wide river opens to bay width. Even worse, our location put us by Dahlgren, Virginia, home of the Naval Surface Weapons Station on the south shore at Upper Machodoc Creek. The chart clearly marked it as a prohibited area with unexploded ordnance, old pilings, shoal water, and every thing else we shun.

As the storm approached we sat becalmed in the channel. The silence was palpable. It was way too deep to anchor. My hope was that the wind would blow us south, downriver, into more open water. It was a reasonable hope. The clouds were moving from the west and I had often been wrong in thinking blasts such as I expected came more from the north.

No such luck. The roaring wind came from north northwest this time. With its high bow and mast farther forward than many dinghies, *Pursuit* took off at planing speed toward Dahlgren. It was a wild ride for a minute or two until we got out of the channel and I tried to anchor. Big mistake. Despite carrying the class required weight galvanized Danforth anchor, some chain, and 100' rode, or perhaps because of it, the anchor line went under the center line of the boat and lay

Potomac Squall

By William A. Bolger

against the rudder so hard the tiller was immobilized in both directions. The anchor skated well astern, not even trying to propel, just skipping along.

Meanwhile, we appeared to be well into the prohibited area and the water depth at times appeared shoal enough to snag and certainly break the rudder, which I tried in vain to unship. It was dark and the wind was not easing, even as rain fell. I comforted myself that we both had life jackets on, it wasn't too cold, and Tim was less worried than I.

Finally something happened. Whether it was the rudder or the anchor that caught momentarily on something, the boat suddenly stopped. The anchor was not visible and the rudder not broken. But waves immediately began pouring over the low transom. We were caught and very swampable. Small motorboats usually swamp over the transom. We had one bucket but couldn't keep up. I again tried to unship the rudder but the tight pintles of a racing dinghy, combined with the wind and water pressure, made that impossible. I was similarly unable to lever the boat around using the paddle. I told Tim we might swamp, to stay with the boat, and that the water was not deep. All this he knew, and he was clearly less concerned than I.

With the boat nearly swamped, the wind finally let up enough for me to lever the boat bow to. What a relief. It was still dark out and raining, but we seemed safe. As we slowly bailed and rested, Thistles hold a lot of water, the sky lightened and the wind disappeared. We were in about 5' of water in an area filled with submerged chart obstacles but

had hit nothing. Making sail at last we drifted slowly toward Rosier Creek further down the Virginia shore, easing into it at dusk and without enough wind to find a proper anchorage. I lacked the energy to paddle, so we anchored, ate a quick supper and I, at least, fell into an exhausted sleep.

The next morning was gorgeous, sunny, cool, and without humidity. Ravenous, skipper and crew chowed down, using supplies we hadn't touched in the previous day's heat and rain. We set the spinnaker in the light westerly and were off at a great pace. The wind freshened steadily and we underestimated our progress, sailing right past our destination of Westmoreland State Park. We didn't know what to look for anyway, but a creek beyond the park set us straight. Even doubling back into what had become a fresh breeze had us arriving hours before our scheduled rendezvous with my wife and daughter. It was a fine finish to an otherwise tough cruise.

Postscript: After staying at the park to swim and picnic, we spent two days house hunting on the Northern Neck and Middle Peninsula of Virginia and found the 90-year-old home we coveted. One result of our move from the Washington rat race to rural Gloucester County, Virginia, is that I frequently use the Route 301 bridge while travelling north. The squall site, and Dahlgren, are clearly visible from the bridge.

Alden Shells

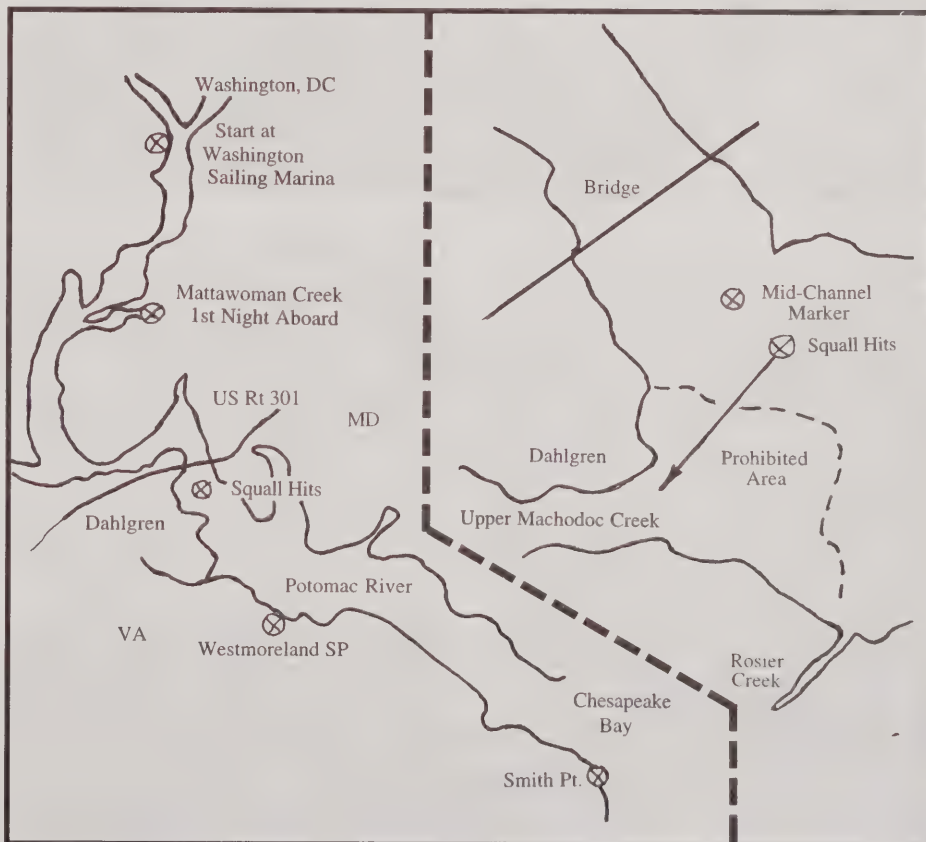
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"Oarmaster 1" parts

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They're off!



Brad Faus' *Frisky Biskit*.

Winslow Womack's *No Name*.



Traditional Racing On the Miles River

By Kevin Brennan

Winter is not especially my favorite time of year. Leave for work in the dark, get home, it's dark, and then there is the cold. Ask my wife, she'll attest that I become a grouch when it becomes too cold to launch a boat. By the time November is in full swing, I will feel cold until April. Before you call me a whiner, I will concede that I do find some pleasure in the winter season, for without it I would certainly miss the coming of spring.

There are two boating events in the fall that help to mentally carry me through the dark and cold months of winter. The first is the annual Traditional Boat Races on the Miles River in St. Michaels, Maryland. The second is the Mid Atlantic Small Craft Festival (MASCF), also in St. Michaels. Both events have the same common factors: (1) both events are hosted by the Chesapeake Bay Maritime Museum; (2) both will have friends who feel like family, even though I will only see these folks a couple times a year; and (3) the boats. The MASCF is covered annually on these pages, so I'll let that one alone.

It's the Traditional Races that I'm thinking and writing to you about today. For the past 11 years I've had the privilege of partaking in this annual event. "Traditional Boat Races:" Skipjacks, schooners, catboats, crabbing skiffs, I tell you, it gets so salty out there it'll make your eyeballs rust. The complexion of the races has changed in the past couple of years, thanks to lawyers and who knows whom else. You see, the skipjacks and schooners, the large working "traditional" boats that still ply the Chesapeake, have been excluded from the races for the past two years. Hopefully someday the decision makers at the CBMM will get hit in the head by the boom hard enough to realize they made a bad tack and will bring the big old gals back into this event.

An added bonus to the Traditional Races is that the log canoes are usually racing the same day as well, which puts one hell a lot of sailing history on the river at one time. If you are not familiar with the log canoes, they are old, over canvassed, graceful, and extremely fast sailing boats. Watching the crews scamper up and down the spring boards to keep the boats balanced is a hoot. These boats are not what you could call highly maneuverable, and when they capsize there is no hope for recovering to finish the race. Once in a while during the races you have to hold your ground because, even though you may have the right of way, it doesn't necessarily mean that the canoes will yield. Intimidation is a big part of their tactics. It's been said that the canoe racers sail with the deed to the river in their back pockets, but that doesn't rattle us.

The pictures that I came home with from this past year are like a color catalog of the Chesapeake Bay Crabbing Skiffs by Howard Chapelle. Chapelle originally wrote two articles that were published in *Yachting* in the 1940s that are now put out in pamphlet form by the CBMM. It only costs a couple of bucks and is a great compilation of line drawings

and descriptions of skiffs representative on the Chesapeake in the days of sail.

The races are held on a Saturday. It's boat and skipper against boat and skipper, none of this handicap stuff. The rules are: (1) have a good time; (2) be safe; and (3) no protests. It has become the ritual for many of us to arrive on Friday to tune up, talk trash, size one another up, and basically have a good sail.

This time the Friday fleet consisted of Doug Burrell, up from Fort Lauderdale in his skipjack rigged 18-footer *Hope*, which, by the way, is a veteran of a crossing to the Bahamas and Cuba. Bill Doyle, the Irish philosopher of the group, who sails on his double ended sharpie *Honga* that was lifted right out of the pages of Chapelle's *Boatbuilding*. Winslow Womack, a wily local fellow, showed up in his skipjack rigged skiff. Winslow used to sail *Scoot*, a sister boat to *Honga*, and was always the boat in our gunshots cuz scoot she did. A couple of us had threatened to hang a bucket from his gud-

geons so we could have half a chance. Brad Faus and his crew Ivan Rohrer came in from York, Pennsylvania, in the newly launched *Frisky Biskit*, lifted right out of the Chapelle pamphlet. I sailed *Cinnamon Girl*, the only double masted boat in the pamphlet.

Friday was the stuff dreams were made of, warm temps, blue sky, steady breeze, hardly anyone else on the water. We sailed about on the river and up Tunis Creek. Sometime during the night Alice Wilson showed up with *Happy Now* and groans were audible. We love Alice dearly, but the only way to beat *Happy Now* is to cheat. Don't tell her, but I have a bailing bucket painted up with crabs and such that I might accidentally leave behind (remember rule number 3). I'll let the pictures tell the rest of the story.

The races are held sometime in September and are organized by Robin Newberg and Richard Scofield of CBMM. Give them a call at (410) 745-2916 or check the museum website at www.cbmm.org.



Bill Doyle's *Honga*.

Hope, *Frisky Biskit* and *Cinnamon Girl* on the beach.



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Prestige, Once More...

The repercussions of perhaps the most important shipwreck in the last 100 years continue to spread. Although the European Parliament invited all concerned parties to attend a public hearing at Brussels, fear of arrest and extradition to Spain kept the owners and operators of the *Prestige* from appearing, but they sent a two-page summary of their views. Speakers often ducked hard questions and the meeting's results were generally indecisive. One potentially impactful statement was made by an official; he said it was the shipping industry that would have to change.

The master of the *Prestige* urged the European Parliament's Transport Committee to consider the treatment of seafarers who were often singled out as scapegoats after major casualties.

Ports (or places) of refuge received much attention. The International Maritime Organization pointed out refusing a ship in distress a place of refuge often compounded the problem and endangered lives, the ship, and the environment. The International Salvors Union argued for a "no reaction without inspection" policy by governments when handling a request for a place of refuge. And the UK denied that it had a secret list of designated places of refuge for ships in distress.

The European Commission released a bland report on the effects of the *Prestige* sinking and oil spill. One position: The EU must take the initiative in proposing the revision of the United Nations Convention of the Law of the Sea to better protect coastal states. Another position: The announcement of a proposal to the European Parliament introducing criminal sanctions covering illegal discharges and major oil pollution (italics added). The Greek Shipowners Co-operation Committee lambasted the EC's plan to crack down on polluters, saying it would do little that existing provisions don't already do but threatened human rights. And the Council of the European Union rejected the EC's plan so the EC decided to sue the Council, saying the EC's plan was better than the CEU's Framework Decision to protect the environment through criminal law and asking for annulment of the Framework.

The Council of the European Union issued a provisional plan for banning single-hull tankers from EU ports. Those over 5,000dwt carrying heavy oils would be banned as soon as the plan became effective, tankers between 600dwt and 5,000dwt would be banned after 2008, pre-MARPOL tankers over 5,000dwt would be banned from 2005, and finally, MARPOL tankers would be banned as of 2010. But a later news item noted that this stance may be eased if the IMO revisits the terms of its 2001 global phase-out table in July.

The end result of all this is that the U.S. may be where all those banned single-hull tankers will sail, so several Congressmen filed bills to speed up the OPA 90-mandated phase-out of single-hull tankers and to otherwise protect U.S. shores. Spain hired a prominent American maritime-law firm to sue the American Bureau of Shipping over the *Prestige* disaster.

Nautical Rough Stuff

Some among the 1,470 passengers boarding the P&O cruise liner *Pacific Sky* at Auckland may have noticed a slight list, but

Beyond the Horizon

By Hugh Ware

probably attributed it to bunkering operations taking place. They may have also spotted welders working on the hull. Then, three days at sea, the sun was in wrong place when they arose. The 46,000-ton ship was returning to Auckland with 165 tonnes of water that shouldn't have been aboard. Subsequent inspections showed that interior ducting hid some corrosion holes, but these could not have let in the water. Then a bulkhead was found to be separating from the hull on both sides due to extensive corrosion, and subsequent voyages were cancelled until the source of the leaks could be discovered. Two weeks later, after extensive repairs, she sailed on another islands cruise. The ship, formerly the *Fair Sky*, then the *Sky Princess*, was built in 1984 and was last inspected on March 3 in Australia.

While en route between Southampton to New York, the *QE 2* had extensive leaking into its after engine room through a corroded seawater fitting supplying an evaporator. It was repaired and similar fittings were checked.

Apparently in a bow-to-stern convoy though thick Baltic ice, the empty Swedish tanker *Omega Donson* ran into the stern of the small Dutch container carrier *MSC Baltic*. The *Omega* ended up with a yard-square hole in its bow well above water.

In the UK, the small Antigua & Barbuda-registered freighter *RMS Mulheim* ran aground under the cliffs at Lands End. The crew of six were safely removed while much of the bunkers was apparently dispersed by a heavy swell. The vessel was too badly damaged to be worth salvaging. Initial plans called for its cargo of shredded plastic from junked vehicles to be lifted up to the cliff top by a conveyor, but a jackup platform next to the wreck ended up unloading the cargo into a barge during high tides.

Near Ho Chi Minh City, a small tanker sank, releasing several hundred tons of oil. Imperiled were thousand of acres of aquaculture farms raising clams and shrimps. This is the second tanker sinking and oil spill on the Saigon River since January.

The Environment and the Law

According to a recent National Academy of Sciences report, little if any irrevocable damage is caused by either natural seeps or accidental spills. In the last 20 years less than 0.001% of the oil produced in U.S. federal and state waters has been spilled, whereas the seeps from natural strata, about 1,700 barrels a day, are about 150 times the amount from oil and gas activities. But examination of aging pipelines may be needed to maintain this good record.

The German icebreaking research ship *Polarstern* embedded itself in the Arctic ice near the North Pole for a multinational investigation on how the ice is formed. It is believed that open lakes in the Arctic ice, called "polynyas," may provide vital information. The ship will have freed itself in May.

The Maritime Administration has been in talks with China concerning the scrapping in China of some of a U.S. fleet of about 130

old commercial and naval vessels. The vessels contain sizable amounts of hazardous materials. The Administration also announced it will provide financial aid to those states willingly to use the deteriorating ships as artificial reefs.

The U.S. Supreme Court ruled that a railroad employee suffering from asbestosis may recover for mental anguish of a fear of developing cancer. Such railroad cases are important to mariners because the statutory basis for a personal injury recovery follows the principles for recovery by railroad workers.

The U.S. convicted a Canadian citizen of violating the U.S. Ocean Dumping Act by dumping hundreds of bags of asbestos waste into the sea while demolishing an old ferry boat being towed from San Diego to Mobile for conversion into a riverboat gambling casino. His unhappy work crew threw the bags but also took the photos that convicted him.

China finally decided it had the duty or right to try the Chinese killer of the Canadian master of the Hong Kong-registered, Panamanian-owned *Jin Bi*. A murderous fight occurred during passage through the international waters of the Strait of Malacca and the master's body was then thrown overboard. The killer was not arrested upon arrival at Singapore but was subsequently detained elsewhere in China.

Although a French lawyer claimed the Filipino watch officer in charge of the Norwegian tanker *Bow Eagle* was made the scapegoat for the accident, he was sentenced to five years in a Norwegian jail for colliding with the French trawler *Cistrude*, killing four, and for failing to assist persons in danger. However, the lawyer for the French master said, "This sentence is not long enough." The accident happened last year in the English Channel.

Southampton magistrates fined the Panamanian company Freedom Investments, owner of the Mediterranean Shipping Company, a surprisingly stiff fine of £100,000 and £5,000 in costs (about \$160,00 and \$8,000 respectively) because its *MSC Arianne*, apparently unwittingly, released a trail of oil south of Plymouth last July. The company believes the fine is excessive because it cooperated fully with authorities and pled guilty at the earliest possible opportunity and is appealing.

U.S. authorities have charged four Filipino crewmen on the cargo vessel *Balsa 58* of trying to smuggle four illegal immigrants from the Dominican Republic at \$8,700 each. Each Filipino faces 10 years in jail and up to \$250,000 in fines if convicted.

Vietnamese border guards seized four fishermen who had retrieved about 160 Vietnam War-vintage bombs from a sunken U.S. warship and were apparently extracting the explosives and selling them for "dynamite" fishing.

Panama authorities have uncovered additional cases of fraud involving the issuance of false Panamanian mariners' licenses. Three employees of the Panama Maritime Authority were arrested and a fourth is being sought. To date, some 20 employees have been punished for involvement in frauds. A fraudulent license could cost as much as \$5,000.

Terrorism

In New Zealand, an Omani man was arrested on a Cook Strait ferry for assaulting a

child during the bus ride to the port. His baggage was left on the ferry and soon became the object of an intensive investigation. The luggage was taken off the ship and the terminal was closed to ferry and human traffic until an X-ray team could be flown in by the Air Force. "In this heightened security environment, we are being more cautious," explained a police sergeant.

Tripling of insurance rates because of the terrorist attack on the French tanker *Limburg* has meant fewer vessel calls at Yemeni ports, and that equates to a loss of 3,000 jobs in the maritime sector. The government figures the attack's cost has been at least \$15 million a month since the attack last October.

New York/New Jersey is spending \$1 million a day on security. (Since this item originally appeared among nautical news items, the sum probably refers to the cost of protecting only the Port of New York/New Jersey.) Farther south, the Coast Guard detained the tanker *Aldawha* in Delaware Bay while it checked the status of the crew because two crew members were Iraqi nationals. When a large floating object was spotted in the Detroit River near the Ambassador Bridge, the Coast Guard promptly investigated. It was a discarded Christmas tree.

Ferries

Two more Bangladeshi ferries sank with fatalities. The *Cyprus* sank in the Tetulia River in high winds and waves from a tropical storm as it neared its terminal with nearly 200 passengers on board. Several bodies were found and many passengers swam to shore, but others may be trapped in the sunken vessel. At least 62 others lost their lives on the Surma River when their ferry collided with a cargo vessel and capsized at night in good weather.

Deficiencies in the onboard safety organization plans must be remedied before the new Swedish ferry *Visby* can be delivered. It must also undergo some shipyard repairs since it collided with a quay during maneuvering exercises.

Near Orkney, 12 passengers on the ferry *Claymore* were taken off by the Longhope lifeboat when one of the ferry's propellers became snagged by an unknown object. No danger, just a precaution ordered by the Shetland Coast Guard.

Off Cape Breton, pack ice stopped the ferry *Lief Ericson* about 38 kilometres off Sydney, Nova Scotia, and a Canadian Coast Guard icebreaker was needed to free the vessel.

Senegalese officials visited the artificial-reefed hull of the ex-*USS Spiegel Grove* to learn recovery and salvage techniques that might be used to recover the sunken and overturned ferry *Le Joola*. The ferry sank several months ago, killing well over 1,000 people, and is now 82' deep about three miles offshore. The Senegal government is determined to refloat the ship and retrieve any bodies still inside.

Competition between Italian ferry operators serving the Tyrrhenian Islands got so vicious that one could take one's car to Sardinia, Corsica, or Elba for a mere £1 or about a buck-sixty.

Navies

The Sri Lanka Navy sank a Tamil Tiger vessel suspected of smuggling weapons. In a

gun battle, four government sailors were injured. The suspect ship then caught fire and sank, taking with it eight to ten rebels.

The Indian Navy is escorting Indian vessels in West Asian waters during the Iraqi War while the U.S. Navy stated coalition forces might sink vessels of any nationality that display signs of "hostile intent." Otherwise, there seemed to be little war impact outside of Iraq and most reports used "normal" to describe port operations.

The Prince of Wales handed over his old ship, the 110-ton ex-minesweeper *HMS Bronington*, to the UK's largest collection of retired 20th century warships. Charles captained the vessel in 1976 and it has been a tourist attraction in the Manchester Ship Canal since its retirement from a Royal Navy career in 1989.

A Singapore governmental inquiry decided that its Navy was the responsible party in the collision between the Singapore warship *Courageous* and the container ship *ANL Indonesia* that killed four sailors, all women.

Shipyards

Hindustan Shipyard begged for financial aid, saying that it has paid its workers on time but delayed paying its officials and administrative staff by 10 days. It has a few orders for small vessels and is also building a submarine for the Indian Navy, but the firm badly needs working capital.

The head of France's leading commercial shipyard has conceded that there must be consolidation of French naval and commercial shipbuilding and pointed out that France is the only country where some yards build only naval ships and other yards build only commercial vessels. His firm, Alstom Chantiers de l'Atlantique, is building the *Queen Mary 2* but lost over 1.4 billion Euros in its last financial year. By the way, now that her funnel has been installed atop the superstructure, the supersized cruise ship *Queen Mary 2* looks like a ship. And a *QM 2* fleetmate being built in Italy will be named *Queen Victoria*.

Odd Bits

Many U.S. servicemen are not U.S. citizens, at least not yet. For example, at least 17 nationalities are represented among the 31 foreign seamen on the Japan-based cruiser *USS Cowpens*, with about 8% of her crew being Filipinos. Non-U.S. citizens do not have access to secured areas, but an enlisted man can get U.S. citizenship in two or three years instead of the normal eight years.

Belgian dockworkers turned violent in demonstrations protesting adoption of the European Union's ports directive. "What do ships' crews know about handling methods? What about safety? Only our profession has proper expertise in this field," claimed a docker.

Triggered by a recent death during an evacuation drill in the UK where a lifejacket slid up and jammed the person in an evacuation chute so that he suffocated, Australian fast-ferry builder Austal Ships protested the insistence of authorities for actual man-in-the-chute evacuation drills. The company claimed that since such systems have to be type-approved and each installation is thoroughly tested before a vessel is accepted, no subsequent tests involving the evacuation of people to life rafts should be necessary or required.

A Singapore company is negotiating with the Solomon Islands about establishing an open registry. The same firm owns a company that operated the disgraced Cambodia Registry.

A new approach to the problem of foreign organisms in ballast water: Japanese researchers are looking for funding to develop ships up to Cape size that do not need water ballast.

In Nigeria, tribal violence and general anarchy forced oil companies to close down oilfield and terminal operations in the Niger Delta and evacuate personnel for several days.

Matson contracted with Kvarerner/Philadelphia to build it two container vessels but now does not want to own them but would charter them if someone else bought the vessels. Matson blamed its oceangoing unions for not making concessions it felt it needed and chartering would avoid such problems.

Life has a certain balance, doesn't it? As unusually heavy ice on the Great Lakes and the St. Lawrence Seaway started breaking up and disappearing, the Coast Guard resumed the International Ice Patrol looking for icebergs drifting south into Atlantic shipping lanes.

Headshakers

Some tankers were earning more than \$100,000 a day but that did probably not last long after the U.S.-led forces invaded Iraq.

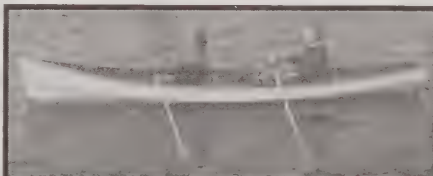
The Coast Guard is concerned that U.S. unmanned barges might have non-U.S. citizens in command. (The Coast Guard is not really crazy because the master of a towing vessel is considered to be in control of the towed barge and, weather permitting, usually is).

The terrorism alert level was Orange when the crew of a tugboat in the Houston Ship Channel spotted someone placing a small box at the base of a bridge support. Authorities were notified, traffic over the bridge was stopped, and part of the Channel was closed to navigation while a Coast Guard team carefully took X-rays of the box. Inside was a dead cat.

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As summer begins, a frequent question is, "What are my legal rights along the more than 1,500 miles of Massachusetts coastline?" For the privately owned shoreline, the answer is somewhat complicated, but we'll do our best to explain.

Let's start with the most straightforward things first. For natural shorelines (i.e., those never modified by filling), that area beyond the typical reach of the high tide (technically known as "mean high tide") is generally private property. The owner can exclude the public completely from this area unless an easement or other legal right of way allows public access across the property. Equally straightforward is the submerged land beyond mean low water, which is almost always owned by the Commonwealth and generally open to all.

The tricky part is the so called "tideflats", or the area between mean high tide

Public Access to the Massachusetts Coastline

Coastlines, MA Office of Coastal Zone Management, Boston, MA

and mean low ride. This intertidal area is governed by the Public Trust Doctrine, which was born in ancient Rome, later made its way to English common law, and was adopted by the Colonies and then by all coastal states upon formation of the Union. Basically, the Public Trust Doctrine holds that certain property rights in tidelands (i.e., all lands presently or formerly subject to tidal action) are held by the state for the common good of its people. In most of the U.S., this doctrine has been used to keep the tideflats in public ownership. In these states, once you get to the shore, you can walk freely over this periodically wet strip of coastline.

In Massachusetts (except for a large section of Provincetown), our colonial forefathers in the 1640s granted ownership of the tideflats to shorefront property owners to stimulate coastal economic development through the building of wharves and docks.

Public rights to use this portion of the tidelands, however, were specifically reserved for three purposes; fishing, fowling, and navigation.

So once you make your way to the Massachusetts shore through some kind of public access way, you are free to move about below the high water mark to catch fish and harvest shellfish, hunt birds, and maneuver a vessel, as long as you obey local and state regulations, of course. In addition, the Massachusetts Attorney General's office broadly defines "fowling" to include birdwatching, although this definition has not been tested in the courts.

To add to the complexity, property owners were granted ownership of the tideflats for only 100 rods (in modern terms, 1,650') from high water. So on intertidal areas wider than 1,650', the public can use the seaward most reaches for any lawful purpose. Also, on tidelands that have been filled for development and are now dry land, a host of public property rights are protected by Chapter 91 of the Massachusetts General Laws (but that is another story altogether).

Still confused? The AG's office has a great pamphlet, *Public Rights/Private Property: Answers to Frequently Asked Questions on Beach Access*, available at <http://www.ago.state.ma.us/pubs/beachacc.htm> (HTML version). The CZM website also has a piece called *Public Rights Along the Shoreline* at <http://www.mass.gov/czm/shorelinepublicaccess.htm>. If you do not have web access, call the CZM Information Line at (617) 626-1212 and we can send you copies.



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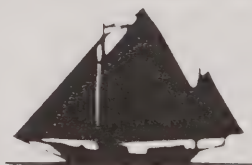
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Reason for Testing: For human powered boaters, efficiency is important. With more efficiency, you can go faster or further with the same amount of energy expended. But how do you know if the equipment you are using is efficient? Without measurable testing, you can only go by guesswork or advertising hype.

For several years I have been interested in human powered propulsion and efficiency. I have been especially interested in oar blade design. Searching the available publications has turned up very little useful information on the subject. As an engineer, it is natural for me to set up tests and analyze the results. So that's what I did. Some of my testing was done to enable me to make product design decisions. Some was done to compare my product to other propulsive systems. But most of it was done for the fun of finding out the answers.

I would like to pass on some of what I've learned to other boat enthusiasts and describe the method of testing I used. Using this method, anyone can do their own efficiency testing.

Defining Efficient: Efficient means performing with the least waste of energy. In boats, efficiency varies with speed. But we don't want to go as slowly as possible for the sake of efficiency. We want to row at some reasonable speed. So for rowing a boat, efficient means moving a specified boat and load at a specified speed using the least physical effort.

The Testing Method: The method is to row a boat at an exact speed and measure the physical effort required to maintain that speed. Then change some component (such as the oar blades) and measure the effort required to maintain the same speed with the new component. You need to standardize the test conditions. This means no wind, no current, consistent water depth, and no turning. The easiest way to measure speed is with a GPS. The easiest way to measure effort is with a heart rate monitor.

Using this method, I row my base system at a specified speed and record my heart rate over a period of time until it stabilizes. Then I change one component and row the new system at the same speed and record my

Rowing Efficiency Testing

By Ron Rantilla

new heart rate. The tested component giving the lowest stabilized heart rate number is the most efficient. To get an idea of the magnitude of the efficiency difference, I express the difference as a percentage of the base.

Note that what I am measuring is relative efficiency (not to be confused with absolute efficiency). This means that I can compare components that I have tested with each other only, not to some absolute standard. Using this system I can test one component of the propulsion system at a time, or I can test two completely different propulsion systems against each other or even different boats for relative efficiency.

Interesting Results: Here are some of the results of my testing that I found to be most interesting:

Oar Blade Size: The largest blades I tested were 116 square inches. These were the curved hatchet type sculling oar blades. The Frontrower's standard blades are 89 square inches and are flat. The hatchet blades were 11% more efficient at the slowest speed tested (3mph). This reverses as speed increases. At 4mph, the 89 square inch blades were 2% more efficient, and at 6mph the 89 square inch blades were 5% more efficient. Even smaller blades (76 square inches) enabled me to sprint faster than either of the larger blades but were less efficient at cruising speeds. These results lead me to believe that there is probably an optimum size oar blade for every speed.

Curved Blades: I compared the curved hatchet blades to some flat blades of the same size, shape, and weight. The curved blades tested to be slightly more efficient (2%) at 3mph. There was no measurable difference at 4 mph and above.

Oar length. The Frontrower's standard oars are 78" from the oarlock pivot to the center of pressure of the blade. This is the same as a typical 9-1/2' long sculling oar. I

could not find any difference in efficiency when varying the length of the standard oars by plus and minus 6". It feels a lot different but does not affect the efficiency.

Paddling. At 4mph a Frontrower system is 20% more efficient than a single blade bent shaft paddle.

Sculling. At 5mph a Frontrower system is 19% more efficient than a sliding seat sculling system. Part of this is due to the more efficient blades, the rest is something else, probably less weight shifting with the fixed seat.

Details: I conducted most of my tests at speeds between 3mph and 6mph in 1mph increments. 3 mph is very slow for rowing and barely gets my heart rate above at-rest, so measuring slower speeds is impractical. Although I am able to sprint my canoe at over 7-1/2mph, at above 6mph it is hard to get my heart rate to stabilize without getting tired or running out of water.

The test boat I used was a Wenonah Prism canoe. This is a fast solo canoe 16-1/2' in length. The standard rowing system was a Frontrower with interchangeable blades. This rowing system is fixed-seat and uses moving pedals for leg power. The standard blade was a flat, broad, tulip shaped blade of 89 square inch surface area.

My GPS read out in tenths of a mile per hour. My digital heart rate monitor reads out in pulses per minute. It is easy to quickly see which component is more efficient. I repeat tests a number of times to verify the results and average the results to improve accuracy. I have found that the best way to record data is to carry a small tape recorder in my shirt pocket and call out my speed and heart rate every two strokes.

To express the difference in efficiency as a percentage of the base, I do this: First, I subtract my at-rest heart rate from my raw heart rates. This gives me my effort heart rate (EHR). Then I use the formula (base EHR - new EHR) x 100 divided by base EHR. The result is the percentage more efficient the new component is over the base component. A negative number would indicate percentage less efficient.

For more information, please visit my web site www.frontrower.com.

SunCat

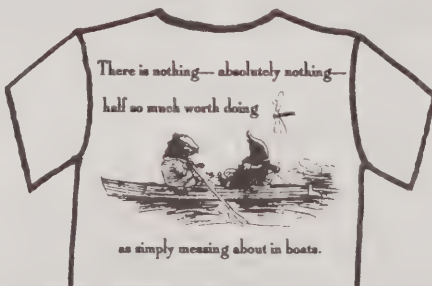


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I am always looking at books, plans and drawings, trying to figure out what type of boat I would like to sail and, do I have the time, space and ability to build it? And, in a reasonable amount of time. Most importantly, could I sell the idea of another boat to the lovely and talented Naomi, my bride?

I would like a larger catboat than little *Bitty Kat*; I built a few years ago. She is 10'5", very pretty, lots of fun, but like most amateur builders and sailors, I always want to try something different. I like the Skipjacks and Bugeyes of the Chesapeake Bay. I would also like a schooner of about 35' 40'. That has to wait for me to find space to attempt something that ambitious. I would also have to find the ambition. Not to mention the permission, from my bride.

I would also like a dory like the *Billy Ruffian*, from the book, *The Thousand Dollar Yacht*. A ketch rigged St. Pierre Dory. Or, maybe something I design myself. I always wondered about a hybrid of a catboat and Friendship sloop, about 25'-30', with a cat ketch gaff rig, or yawl rigged with two staysails. Or, a cat yawl, with a small jib, on a hogged bowsprit. Whatever I build, it has to have a bowsprit. They just look cool.

But, you can see my dilemma. I can't make a decision. And, I want to build and sail one of every type.

Thankfully, the decision was finally made one day after reading a letter from Mr. Bob Hicks. It was in answer to a note I sent

How To Decide On A New Boat Building Project

By Greg Grundtisch

about a Skipjack frame he had hanging in his barn. I had read about it in his Commentary, in the March 15, 2003 issue. The short version is, Mr. Hicks offered it to me, and I accepted his generous offer.

A few weeks later, the lovely and talented Naomi, and I were in Wenham, Massachusetts visiting with Bob and Jane Hicks, at their office residence complex, and touring the grounds and outbuildings.

Over coffee and muffins, we had an enjoyable time learning of the Hicks' various businesses, past and present. Mrs. Hicks, now semi retired from a successful gardening nursery business, and Mr. Hicks semi-retired from motorcycle racing. Neither one appears to have slowed down, or taken retirement too seriously, as they are busier and more productive than most of us.

I was flattered when Mr. Hicks said we were kindred spirits, as he has the same desire and passion, (obsession) for boats that I have. He may have a larger problem. He also has it for motorcycles and bicycles as well. He even has one with a sail!

Anyway, we went into the building that held the Skipjack frame hanging in the rafters, and proceeded to bring her down, using a block and tackle, and lines fore and aft to guide her. When the skipjack landed, we proceeded to slide her through the back window that Mr. Hicks had removed. He lifted the stern post up and through, and then he jumped up and out the window before I could ask, "what next?" With Mrs. Hicks at the billet, and myself at the centerboard trunk, we slid her out of the barn. We carefully positioned her in the proper position, and then, as all kindred spirits will do, we did the traditional "skipjack dance".

When the dancing ended, we tied her down to the trailer, and said thanks, and fair winds to the Hicks, and reluctantly returned to western New York.

The frame is now in our yard among the other boats. She is waiting patiently for the new building shed to be finished. The skipjack project will begin promptly in the early fall, if not sooner.

This skipjack is a half scale version of *Messenger*, 35'7" long, oyster pirate skipjack. An oyster pirate was built a bit trimmer, to be able to escape government patrol boats. Pirates were used to dredge for oysters at night, in areas that were designated for harvesting by hand. This is going to be one pretty little boat when complete, and I was fortunate enough to have all the difficult work started for me. And, I didn't have to decide what type of boat to build.



The Skipjack

About 1890 1900, shipbuilding costs increased so much around Chesapeake Bay that many watermen found they could no longer build or operate their older types of craft profitably. A new type, based on the ordinary unframed, square sterned rowing skiffs, was devised by giving to a greatly enlarged (25'-60') long skiff hull a dead rise bottom, a deck, a cabin, and one, occasionally two, sharp headed sails with a jib on raking pole masts. A few with round, staved sterns, called nancies, were built along the Potomac. Most skipjacks had outboard rudders, but many were built with rudders inboard. The skipjack, or bateau as it is also named, proved to be very successful as an oyster dredger and is the only large type of sailing craft being built today.



The Newcomer The V Bottom

The boats, therefore, have well cut sails and a very large centerboard. The sails are fitted with lazy jacks so that they may be lowered quickly, without furling. The figure shows the details of the rig that are quite typical.

The centerboards of the dredging bateaux are fitted so that, when hauled up, they extend some distance below the keel but, if an obstruction is hit, the board can rise in the case. The purpose of this is to enable the boat to sail on the wind in water so shoal that the normal methods of hinging the board would not give enough area below the keel to allow sailing close hauled. To permit the board to take the required position, the lower

fore corner is well rounded, and, instead of a hole for the pivot bolt, there is a slanting slot; the board is somewhat shorter than the slot and case inside. Thus, the board can move up and down and fore and aft a slight amount, when it is hauled up. The boards are not ballasted and for submerging

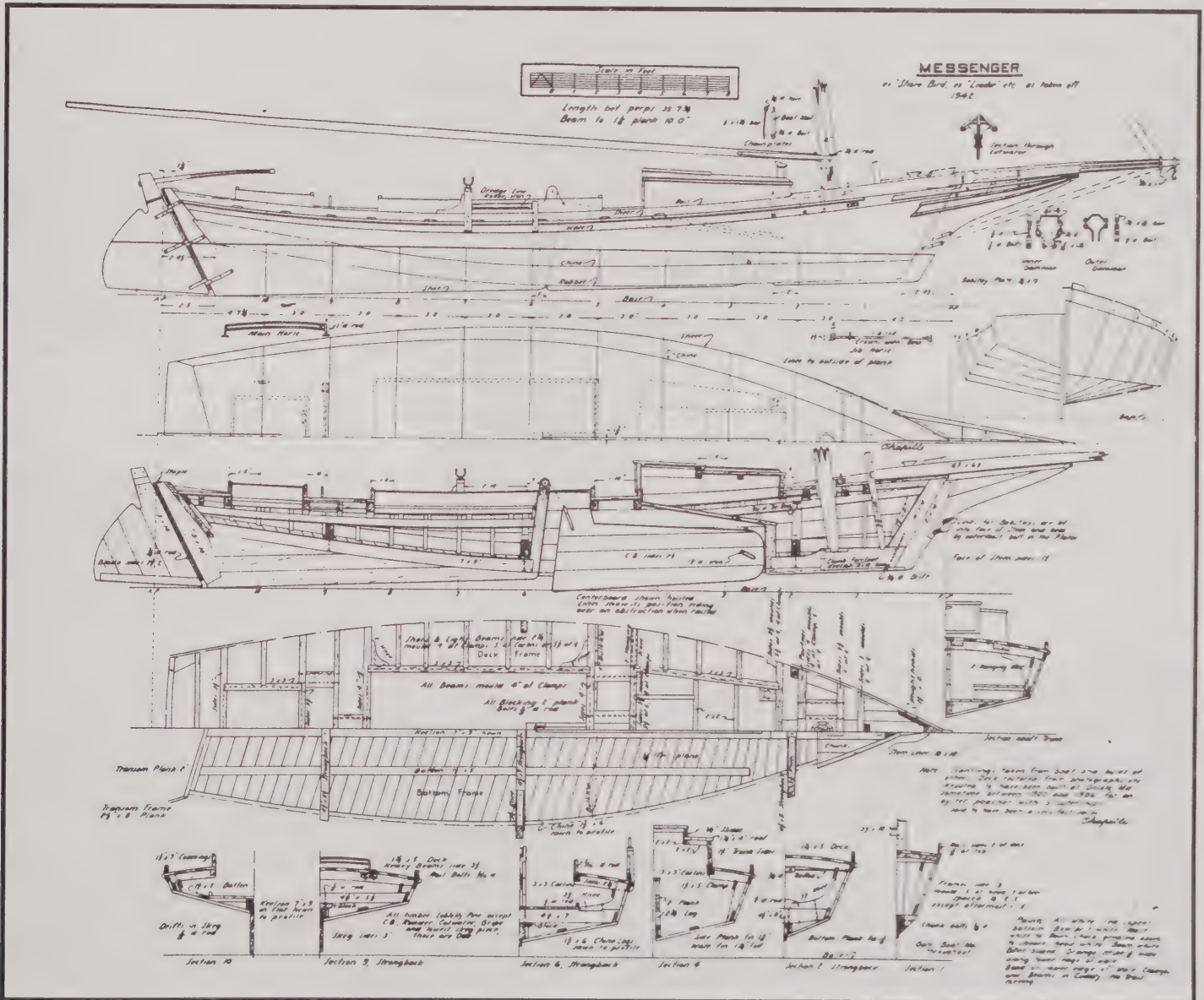
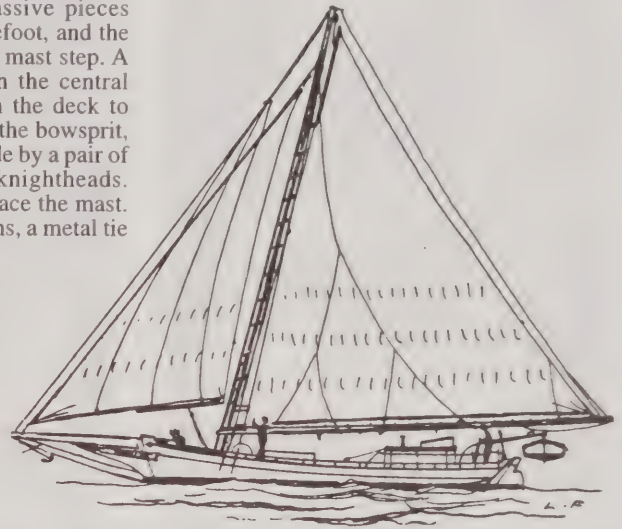
Messenger follows the typical skipjack design, with a solidly constructed, shallow draft, V bottom hull, 35' long. However, she is slightly trimmer than most skipjacks, for speed in slipping away from government patrol boats. Other skipjack features are the rake of *Messenger's* transom and mast and her deck arrangement, cabin forward, a large cargo well amidships and a standing well aft, where a man was able to handle the tiller without having to worry about being hit by a swinging boom. The herringbone pattern of the cross planking on the bottom (lower view) is also common to skipjacks.

The skipjack *Messenger* was built in Maryland around 1900 as an oyster pirate. Her owner would sail out under cover of night to dredge in areas that were reserved for scooping up the shellfish by hand. Like most oystermen, she has a shallow draft for maneuvering in shoal waters, and a large carrying capacity. Within this basic design, *Messenger* displays a variety of distinguishing skipjack features, developed because of local sailing conditions and design traditions in the Chesapeake area. The most

The skipjack's bow reveals extra solid construction to support the boat's large mast and heavy bowsprit. Five massive pieces called chunks make up the forefoot, and the largest in the center provides a mast step. A samson post, also anchored in the central chunk, rises vertically through the deck to take up the backward thrust of the bowsprit, which is buttressed on either side by a pair of other vertical members, the knightheads. Thick blocks called partners brace the mast. Athwartships, sturdy deck beams, a metal tie rod and a timber strongback reinforce the sides and bottom of the hull.

The skipjack's sturdy construction continues aft, with knees and strongbacks set at intervals along the keelson to brace the hull. Cross planks 1-3/8" thick are reinforced longitudinally by

two battens 5" wide, and an oak shoe protects the deadwood. Other parts made of white oak are the large centerboard, which is 2-1/2" thick, the rudder and the foremost exterior pieces of the centerboard shoe.





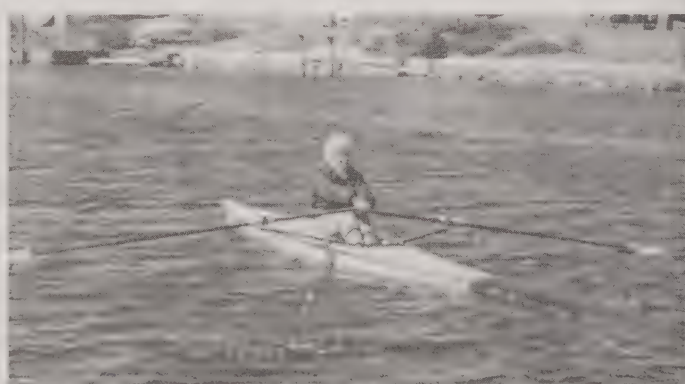
Launch time, on the dock with riggers folded.



Opening up the riggers.



Dockside with riggers securely braced against the dock, Doug steps into the low footwell. The rowing Martins, Doug and Lorna, do a fast row-by the dock for this photo op.



The All New **ECHO** ROWING SHELL

***Celebrating the
Ease and Rhythm
of Rowing***

By Bob Hicks

Doug Martin's newest rowing shell design, Echo, is a sleek 18-footer with swoopy, flowing lines that bears little resemblance to his previous exercise in rowing shell design, the Alden Star. And it's a Ferrari when set alongside the Checker sedan Alden, Doug's father, Arthur Martin's, creation which popularized recreational rowing shells for everyday folks afloat. And yet, despite an appearance that shouts "performance," Echo is as reassuringly stable as an Alden while being a whole lot faster, according to Doug.

Doug ought to know, he grew up in the Martin family's business building and marketing Arthur's famous Alden shells. Today Doug is no longer involved with Aldens, after Arthur died the business was sold out of the family. Doug's brother-in-law, Ted Perry, did continue building the Aldens at his East/West Custom Boats in Eliot, Maine. Ted says that 8,000 of the 10,000 fiberglass boats that he's built since he began a quarter century ago were Aldens. Now, Ted and his wife Lorna (Doug's sister) are turning their attention to getting the Echo out there.

It was mid-March when I drove the 50 miles to Eliot, Maine, to see what this was all about. After viewing the boat at the shop, we all went over to Chauncy Creek in Kittery Point, where the family has one of those old timey waterfront boathouses, kept when they sold the family home across the street. It was sunny but blustery, the northeast wind was blowing right down the creek, but Doug and Lorna gamely set forth for the photo op while I stood on the float hunkered down inside my big old barncoat. I declined to take a turn, never having rowed a sliding seat shell and not about to undertake to do so on the bitter cold winter ocean.

I am not qualified to offer opinions about the perceived performance of the Echo, but I

did notice the absence of any wake when Lorna and Doug sprinted past the dock. I could also, of course, view the getting into and out of routine, at which times Doug's really favorite aspect of his design came into play, the uniquely folding outriggers. The inner rigger when docked can also be lifted up towards vertical to allow one to step into the boat without rigger interference. It can even be used as a sort of prop to brace oneself against while stepping aboard. Getting aboard just was not a balancing act at all. That is, not for Doug and Lorna. I did not try for reasons already presented.

Doug is so enamored of his rigger concept that he extols it right up front in the brochure, "The Echo integrates functions within flowing lines. From the start, the shell was designed around the unique Echo folding rigger system." Doug further states in the brochure that "I wanted the riggers to fold in and out as easily as operating a car door."

Let's talk about the rigger system. It is integral with the boat, it does not need to be

removed to cartop or otherwise lug the boat off the water. At the end of their brief outing afloat Ted picked up one of the boats, riggers so folded, held in place with a strap that also keeps the seat in place, and lugged it up the steep ice and snow covered banking past the boathouse to the cars, where he slid it onto the roof rack as one assembly. It is possible even to include the oars in the handy carrying package, locked under the folded riggers.

But, the main function of the Echo is to be rowed, of course, and so we fast forward to May when Doug appeared at the Essex River Race in Essex, Massachusetts, a 3-1/2 mile out and back event in tidal Essex Bay. Doug seemed at ease underway, he made no pretense of being a serious competitor, but stayed with the other touring recreational sliding seat boats and at the finish even went on to do a bit of rubbernecking off Harold Burnham's boatyard where the *Fame* was under construction.

Our final look-in on the Echo prior to writing this report was at the John Gardner

Small Craft Workshop at Mystic Seaport in early June, where Ted and Lorna brought two of the Echos for interested persons to try out (Doug was at his daughter's high school graduation). They were the only sliding seat boats at this gathering of traditional small craft, welcome these days under the liberalized Mystic overview of the event as being a small craft meet first, traditional no longer an absolute requirement but rather a preferred modifier. The boats were constantly out on the river so the interest was there, and later on Saturday I stood with Ted on the dock watching one young woman way out on the river. Several attempts to persuade her to bring in the boat had resulted in the response, "I don't want to give it back."

Ted told me he had suggested she come in, go get her checkbook, and for \$2895 take the boat home with her. "She has never rowed a sliding seat boat before," he went on, which sorta illustrated how Doug's concept of stability coupled with speed seems to be a valid one.



Up and away, outing over, Ted carries off the Echo.



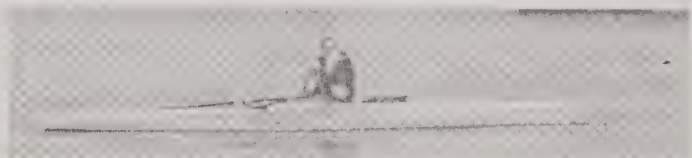
After the Essex River Race was over, Doug looked in on Harold Burnham's *Fame* project.



At Mystic, Ted explains the Echo's operational features afloat.



"I don't wanna bring it back," this young woman hollered back when Ted suggested she bring the boat in



It has been going slow. For one thing, old Sam has been busy with more important projects (that redheaded baby is a handful for one thing) and, because I am determined to maintain the purity of this experiment, I have had to spend a lot of time at the coast and fooling around on the rivers and lakes so as not to go into the shop and hit a little lick on the boat myself. The status at the present time (middle of May) is that the complete hull of the boat is sitting in there on the bench with all the molds still in there.

It is all tacked up with super glue and the planking has been scraped inside and out so that the edges of the strips can't be felt, but the hull has not been planed fair and, except for gluing on the outer stem, nothing has been epoxified. Though the boat is very fair and smooth and could probably just be epoxified and fiberglassed as it is and come out alright, it is possible to feel a few little places where there is a slight dip in the planking (nothing over 1/32"). I had a world of those kinds of places on the Rescue Minor and I devised a little trick to pull them out so I wouldn't have to plane the planking down any thinner than necessary to get the hull smooth enough to suit any prissy pants observer.

Another Update... Grumman Sport Boat Improvement Project

By Robb White

Since the inside is epoxified first and that glues the planking in rigid alignment forever, I screwed little scabs to the outside from the inside to pull the little dips in the planking out even. I cut little crescent shaped pieces of wood to fit the place where I could feel a little dip and drove one screw (5/8" #4, square drive from McFeely) through the planking into the hollow of the crescent. Because the crescent tapered toward the ends, there was enough of a spring so that the ends of the little scab did not distort the planking either side of the dip. I tried to cut the inside curve of the scab a little too curved so I could adjust, by feel, as I tightened up on the screw. It is a quick and good working way to fair the hull so you don't have to carve the whole boat down to a few little low places.

Sam did the whole port side in one hour. That's only seven scabs and I could have done it in 10 minutes, but Sam is a nitpicker. Back

when we went on all night model airplane building binges, Wes and I would be outside winding up the rubber band before the dew was off the grass, but Sam would still be in there with the glue fumes gluing the little bumps on the cowl of the Monocoupe. There are at least two of those scabs on the port side of this boat that I think are superfluous. I tried to tell him that we ain't trying to make no "Picnic Boat" here, but he just said, "Sit down, son. Just who the hell do you think is robbing this train anyway?"

Anyway, I learned the hard way to put some tape on those scabs so when the glue is squeezed all inside the hot planking of the boat and capillary action works its wonders, the epoxy won't work its wonderful way under all those scabs so you have to carve them off the boat. My grandchildren are coming this afternoon and they'll punch out little circles of tape with a hole puncher and cover the screws so Sam can get them out. I have six grandchildren and seven screws, so I guess it'll all work out. They fit into the category of "skillful amateur" so, as long as they are on the clock, the validity of this experiment will remain pure.

An aside: You know, it is easy to make assumptions when you get old. You assume that everybody knows the same things that everybody knew back when you were young and are apt to forget that there are young people who might not have appreciated the value of old lore enough to have properly perpetuated it, so I'll tell you the old train robbing joke in case you are young and ignorant.

Back in the olden days there were these things called passenger trains. They were pulled by locomotives and the man driving it was called a locomotive engineer (a dignified job title if there ever was one. I would much rather be called a locomotive engineer than a CEO). Unlike freight trains, which lumbered across the countryside, going slow so the hobos could get on and off easy, passenger trains hauled ass so the robbers couldn't get on and rob the passengers. They had names like *The City of New Orleans* and riding on such as that before the advance of civilization relegated them into obsolescence was a pretty good trip.

I guess masochism is more common than anybody realized. I know I would heap rather go to the dining car and eat a porterhouse steak and then to the bar car and have me a little toddy and then go down to my Pullman and get in my little bed to be rocked to sleep by the rhythm of the rails, goodnight *City of New Orleans*, than I would squat in a wretched airport eating out of vending machines and sleeping in a hard plastic chair that smells like disgruntlement. That's progress, y'all. Man, people love to wallow in their own stupidity, don't they?

Damn, I got aside of my aside. Anyway, somehow the train robber got on the train and stood up in front of the car with his big pistol and declared that he was going to rob all the men and screw all the women. With that, a brave passenger (someone like the heroes of the Pennsylvania 9/11 crash, I guess) stood up with his big pistol and said, "You, sir, may very well rob all the men, but you'll only touch these women over my dead body."

"Sit your narrow ass down, son," declared an old lady passenger. "Who the hell you think is robbing this train anyway?"



Upside down: The next step is to epoxify the inside of the hull between the molds. Then Sam can take off those little scabs and the planking will stay straight without them.

Right side up: The epoxy has been applied between the molds, the scabs are off, and now he'll take the molds out and scrape the places where they were fair and smooth and fix the screw holes and epoxify those places. The next step is to fair and fiberglass the outside of the hull. The reason to fiberglass the outside first is you want that to come out smooth, but you can use the scraps from that to do the inside where it doesn't need to be so perfect. We will put fiberglass on the bare wood. That works very well and eliminates a lot of sanding of epoxy. You just have to be careful to keep applying epoxy and heating until the wood has soaked up all it can hold.



Joli Boat

By Philip Thiel, NA

I've designed Joli Boat for the cruising life in the slow lane on sheltered inland waterways. Also designed for the advanced amateur boatbuilder, Joli Boat features the simplest possible barge-like hull (with great proportions) built of marine plywood and softwood framing.

Accommodating four adults under good headroom with generous storage space, the arrangement includes a forward deck, two single berths, a water closet and storage space, a four place salon with adjacent galley, a double berth with storage, and an after deck.

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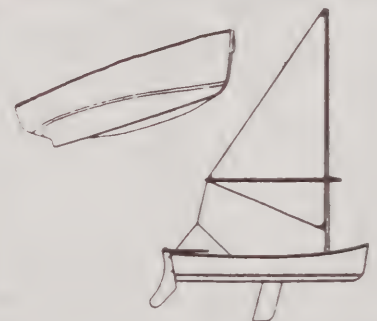


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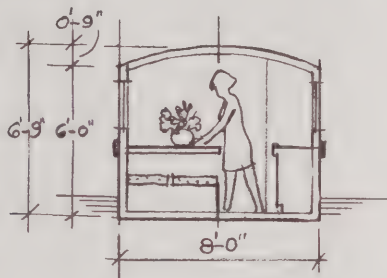
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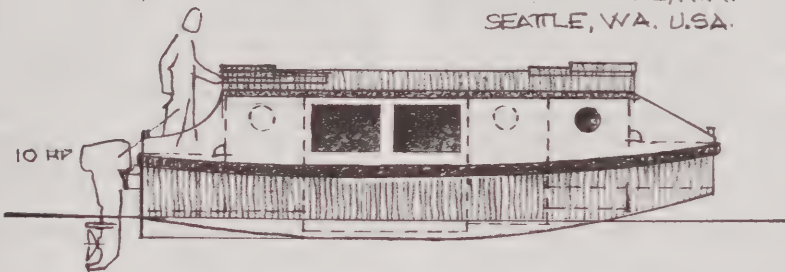
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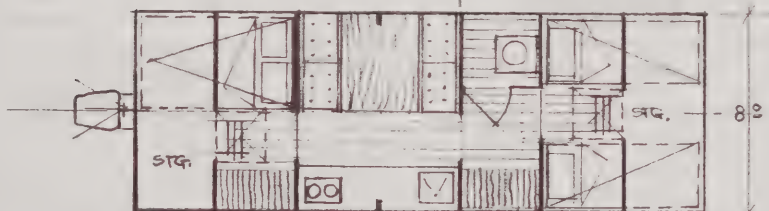
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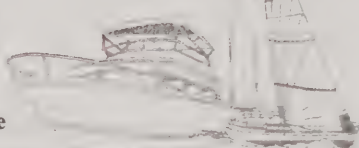
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Australia 2003 AD: "What'll one of these mongrels look like in a few years, Mate?" Reg is tying up his 41' Benetau.

"Got time for a beer?" I nod towards the club bar. "Come to think of it, this may take a few." Against this poser a SF writer is more expert than a yacht designer. But I've read books by both.

Because progress in communications and electronics has been so mind boggling in recent years, people have come to expect it in all areas. In fact, it's often not happening at all, people are often simply finding out about changes that have been in place for a while, but weren't previously available for push button perusal.

"Hello Internet, my, my, the world is really advancing, isn't it?" No, nein, nyet. Advertising has advanced heaps. It's now capable of lying to us with ten times the rapidity. And like machine gun bullets, eventually one gets through.

So this is my notion of what a cruiser racer for a few keen cruising sailors might be around the year 2033, and I've named the boat after its year of manufacture. And because my imagination is none too active, we might just find that a so called "Person of Vision" might be able to get started right away. Well, tomorrow anyway...

This isn't a cheap boat, the customer would need considerable means. But neither is this a Sci Fi fantasy with gizmos that may never be invented shunting craft along at fantastic multiples of windspeed. What devel-

Future Grey Water Cruising Electro Sailer

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lwl 38

bmax 14

draught 2 5

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By Jeff Gilbert

<jgilbert@webone.com.au>

ops below is a yacht conceivable in a future soon enough to be recognizable, and have a reasonable chance of arriving!

I've assumed small advances in speed of operation of mechanical devices and a new but entirely possible hull material. Most of the yacht could be built now, but the huge cost of developing its software would require government funding or a mass production run which the current world customer base could not support.

Thirty years pass...

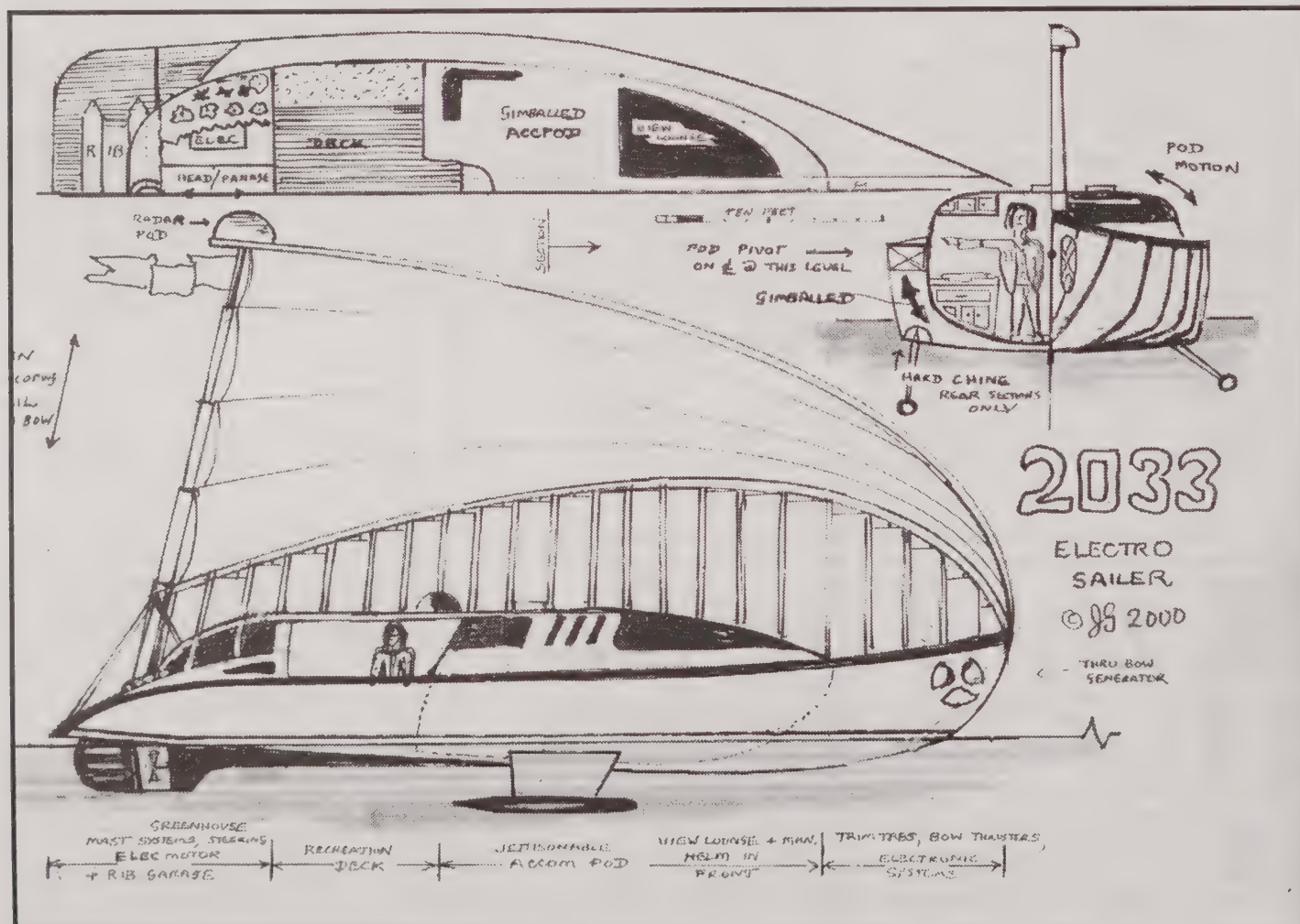
Earth 2033: Cities are bigger and more polluting. The ozone has taken a fair hammering and home on the range, the skies ARE cloudy all day. Skin cancer is endemic amongst careless yachties. Watermakers are

only used well over the horizon. The factor most influential to design is the flukiness of sea conditions and weather, wind shifts are unpredictable and frequent compared with the more stable patterns before global warming became significant.

The big issue is speed, people have time-tables and cruising types have deadlines. Punters who have just spent a small ransom on a new boat have jobs that require the credibility of an occasional corporal appearance and no longer wish to go pottering off across the horizon with all the urgency of a drunken poet. The old methods of souping up a yacht have hit the wall. Sheer discomfort prevents weights from dropping indefinitely; seas and winds will never cooperate. No one describes a leg of the Whitbread as a relaxing cruise.

Ten knots in a burst is not unusual. Kept up for a few hours it represents a chunk of real progress. Maintained for days it represents spectacular passage times. But ten knot cruising averages are achievable with a good planing hull by making up the deficit between wallowing and planing with supplementary electric motors, barely noticeable except for the very faint vibration which gives these optimized sailcraft the nickname Buzzbombs. Is the Buzzbomb a yacht? Of course it is. It's a smart yacht, controlled in all ways by a Central Computer which garners info from both direct measurement and satellite bounced importation.

It uses sail and power in carefully orchestrated concert, producing a great result



without overstressing either input; i.e., breaking gear or gobbling fuel. The sum is indeed greater than the parts. If in purist terms it's cheating, so be it. No one is being harmed unless some idiot tries to race one, and if it offends purists they needn't look at it, and anyway will only get a brief look at it shrinking into the distance.

In the macro sense, "2033" sets course to avoid the worst weather and seeks out helpful currents and winds in following the itinerary you ask. If it can't make a waypoint without severe discomfort, it says so. It may wish to lose a little time on one section of a trip and make it up elsewhere. It updates the itinerary continuously as more info comes to hand. All the sailor does is input final destination and deadline, place and length of stopovers, and the seasickness ratings of the crew. You may have asked too much of the boat, you sort out your itinerary with the computer like planning a meal with a master chef.

Microprocessors operate micro systems. The salsail (solid sail) angles are continuously changing, the boat is virtually paddling itself through the winds. Heel angles and rudder settings interplay with sails to gain the best local VMG, and deficits are made up by introduction of enough prop revs (expensive yachts use jets) to make required speed without running overnight battery levels low. If the boat can't make the speed to meet a deadline, either interim or final, it will call for a shortened stopover or maybe a repair, or maybe suggest dropping into a Coast Guard "jackship" for an electric boost (at a price).

Last, but not least, the central computer talks to and avoids collision with other shipping, handles shore communication, and provides entertainment.

Where's the pleasure of sailing? Whenever you want you can take the boat over, shut off the electrical motive top-up and sail by keyboard, or conventionally by tiller/wheel and sheet, although the average boat will be a sail-by-wire setup. For example, the sheet will be linked to a spring loaded sail angle indicator/servo, the tiller looks and feels right but is actually a large scale joystick with adjustable imitation loads. The more expensive boats will have a real tiller linked direct to a rudder for true manual sailing, and not steered by the computers, servojets imitating rudder action. The low aspect rudder will, of course, retract to decrease friction during normal planing.

Another reminder of the old days will be an auxiliary sail, such as the upper lateen drawn on "2033". Deployment of this sail will be very much a gung ho operation, but the telescoping rear mast can close the jaws which spread it, getting you out of a possible knockdown in seconds. While being sailed manually the boat continues monitoring, ready to take over should the helmsperson wander or nod off. After you've worn yourself out, the boat gives you a printout of your performance against what it would have done in the circumstances. For beginners, the boat can be sailed in "computer advice" mode with its background of electronic nagging.

The "2033 Class" encompasses the following design features:

Hull: The hull is optimized to plane at as low a speed as possible. Thus, the additional power required to put the craft on a plane is minimal and renewable by solar cells. The fine hull entry gives way to a harsher turn

of bilge; the rear half of the hull sports an uncompromised planing section with a shallow vee underbody and hard chine. This does not look unusual as the chine gradually dissolves forward until the hull is a full semicircular underbody 5' behind the wave climbing curved stem.

The hull is a one piece monocoque of 12mm molded cyclemince, a mixture of shaved recycled aluminum cans and plastic bottles set in a cheap epoxy magma base. This mixture sets like concrete and can be drilled and sanded fair for painting. Fairing is by robotics before the hull sets to full strength, long belt sanders wrapping across the whole width of the hull. Fittings are the same, or timber if you can afford it, and berths are variable density temperfoam which molds to your body with a slow erase memory, holding you firmly in your bunk without restraint, and "temperature reading" your body, maintaining a comfortable level without covers.

The centrally mounted 17' accommodation pod features damped gimballing around a longitudinal axis, while microprocessors operate trim tabs to damp fore/aft hull pitching. The remaining hull sections, 8' fore and 18' aft of the accpod, are ungimballed and make up a total of 43' overall for this 2-4 person intercontinental "twenny thirty three".

Bow windage is greatly reduced by the through hull wind generator which channels the offending blast straight through the hull at its narrowest point, spinning a genny on the way. The turbine blades are set to the direction of spin produced by a splash from the bow wave. Solar cells have become efficient enough and mass produced enough to be affordable, and are tough enough to be walked on. The yacht has solid sails and so "2033" sports the deck area (minus windows) plus the salsail area as solar cells. Internal ballast under the floor is all gel storage batteries. These can be charged from a pier, by a lighting strike through the telescoping mast (most of the charge is dumped through the keel skeg), or by a Coast Guard "jackship" if you are willing to pay to get home faster.

Sails: Because of their efficiency and combination with the electric drive, only 300sf of rigid working sail is needed, with a further soft lateen topsail added as a sort of crosswind spinnaker and fun sail. As this boat is constantly sailing at close to multihull speeds, apparent wind is off the forr'd quarter and the boat is nearly always planing cross wind. Tacking downwind is common but triangular staysails with the base from the rail to the ship CL can be raised for a direct downwind sleigh ride.

About 20 solid 15'x2' NACA lower "door" sails are balance mounted on vertical axes between two fixed rails, each roughly a quarter ellipse, the lower running over the accpod coach house roof. Salsails, or dorsails, as they are often called, adjust on servos to constantly optimize the row of slots. The top runner is the fixed lower of the lateen jaw, with the upper identically shaped swiveling at the bow in the vertical plane, its height (and thus its belly) trimmed by the telescoping rear mast which can swing across the boat beam on a pivoted base. The mast is stayed by adjustable length tensioning shrouds from its tip to each rail. These govern the mast angle and can spill gusts which would put a lesser beast on its ear. As mentioned they can support downwind sails with the mast static.

The dorsails have flip out lips which can be deployed manually at anchor. Releasing the dorsail angle control servos converts the entire lower sail plan to a generator.

Ballast: Twin stub keels have ballasted bulbs and can swing down to form a 5' draught, be angled out to form (with the rear fin) a beaching/bottom scrub base, or up parallel to the water surface to a minimum 2' gunkholing draught. Water ballasting is an optional extra and can be raided for fresh water showers and positioned to improve fore aft trim.

Stem-stern walkthrough - the 5' rear boarding deck: This is just above the waterline and is used to launch the 10'x4' RIB which is lashed there in a permanent state of readiness with its electric OB in a watertight locker on board. RIB is part tucked into a garage behind whose watertight rear wall is the engine room.

Engine rooms: These contain the main electrical drive(s) which operate through sail drive legs and feathering props. Some stolid purists fork out for a diesel on one side and electric the other and burden themselves with the weight of by now extremely expensive stinking diesel tanks. Many of these gently smiling elders claim they can't sleep without the reassuring thump that accompanies the wastage of fossil fuels. I'd be smiling too if I could afford fossil fuel in the stringent 2030's.

The engine rooms are accessible by huge watertight clamping doors just above the recreation deck sole which also can be pan lifted. The engines whine and hum quietly as they respond to constant rev changes as the central computer holds the boat speed steady through gusty winds. Below the engines the bilge is bone dry and clean unless you are one of the terminal gas heads. The hull maternal doesn't leak and the pumps work. Above the engine room lies the greenhouse.

Greenhouse: This is aft of the deck. The garden recycles toilet wastes producing high yield and bonsai veggies and herbs for the table. Accordingly the...

Head: With shower adjacent, positioned according to the layout of the equally ungimballed...

Deck: Which acts as a manual sailing cockpit and generous (12'x9') outdoor recreation area. Light pours through a clear roof which blocks UV rays and the occasional high spirited nuclear blast. Sails are visible above. Mosquito netted side screens can be deployed as can plexiglass windows. These slide up from the hull (as in an automobile) after raising a watertight cover. A sitting plinth with a tinted bubble above can be used for manual steering, and a split level provides seating, a dining table, plus a double sleeping out platform. And, of course, a solar BBQ for cooking the fish you catch and store live in a seawater viewing tank set in the cockpit side wall. A centrally located companionway lets you into the...

Accpod: The accommodation pod is able to revolve (in a restricted range with comfortably damped motion) about a central axis which itself can pivot fore and aft to keep the whole 16'x12' level. The sole can be up to 6' wide due to the flat planing hull form. Full headroom to owner's requirement is available over the full sole area. The Accpod clips into the ballasted hull and can be quick released. One can inspect enclosed or open plan factory fit outs, or take a pod home to test living

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in or to fit out yourself. On return to the factory, your finished pod is carefully weighed and the hull ballast redeployed to balance the entire craft against your fit out.

The pod contains all food storage, galley, display screens, watermaker, berths, galley, and comfortable seating. Safeties are included as well as backup electronics, if disaster strikes the pod is designed with viable boat sections, and becomes in a single Walter Mitty like leap of belief, an...

Escape pod: Equipped with its own sail drive under the companionway steps. It is fully watertight but light and polystyrene packed to float even if swamped. In an emergency the long sail track above has pre breaks in it, the lateen is dragged to one side by the mast and the stub axles pivoting the pod withdrawn, these activities achieved by solenoid/servo or manually. The ballasted section of the stricken craft can be left to sink away from beneath the pod. With any luck the RIB will be afloat nearby. Escape pod starts sending Maydays and activates satellite beacons the moment it gets its bottom wet. Forr'd of the pod lies the...

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Electronics center: The heart of the ship, despite its position where the absence of aircon allows the sea to keep the computers advantageously cool. (Aircon is restricted to the accpod, the remainder of the ship reminds that one is actually out in the elements, the reason you are sailing in the first place). Miniaturization means ample space for a voyeur navigator to sit in, but such a person would probably prefer to chat to his ship by voice while mixing a drink in the warmth of the pod.

Weather maps and a mind boggling array of data can be displayed and analyzed on the main saloon or cockpit consoles at a vocal command. Security includes voice recognition and lockdowns at a spoken command. In 2033 such systems are a part of life. Automatic overrides beat unlikely shorts as all cabling is shock/waterproof and doubled. Last resort manual systems include a gabbling suitcase of motherboards, and for the hopelessly nostalgic, a cedar bucket.

Input/outputs are many and varied including laser sonar and survey, GPS, and all satellite communications, weather, and entertainment. Electronic spray and rain shielding are standard as is magnetic shielding and SHIPVIZ which by law lets the world know exactly where you are, as if they care. Scrambling is available for business calls. Holoradar can be projected into the 3D holobox or 2D screens.

New York 2043: An old man sits smoking a pipe and casting a line carefully into the spaces between a row of aging charter electrocruisers plugged to the pier. An agitated executive type is attempting to engage him in conversation.

"Said he'd meet me here!"

"Eh yup."

"An hour ago. I need a break, see. I've got three weeks."

"Eh yup."

"Do you reckon that old blue one would make Florida 'n back?? What is it, oh yeah an old "2033". He couldn't want much. Hell, look at the paint. But I can't be late back. Jar reckon the electronics are OK? Sails look new. Registration's there, too. What's that thing on deck, a bucket? Those old Microsoft systems are supposed to be reliable. Whaddyia think? Whassup?"

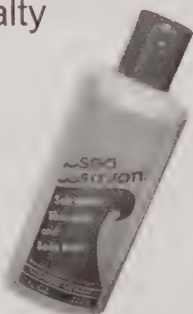
The old man climbs laboriously to his feet, taps the mobile phone in the younger man's top pocket, then waves his hand vaguely at the nine digits painted neatly across on the old boat's stern.

"Son, she's plugged in. Ask someone who knows. Ask her."

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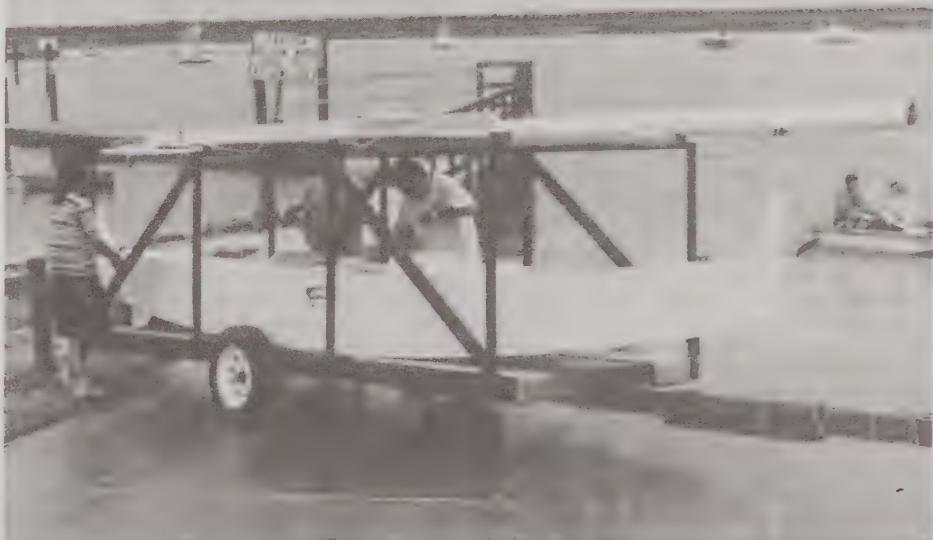
Design #664
 19'6" x 10'0" x 147sf

The performance of the first proa, as rendered by Joe Norwood from the cartoon in *Boats With An Open Mind*, certainly was promising. The simple but well defined box shapes for hull and float were the obvious solution for a testing platform of reasonable hydrodynamic qualities assembled rapidly at least expense; rising bow noise certainly is a reflection of reaching satisfying speeds and is a reliable warning to traffic in her path. The rig had been tested on Phil's Canard (Design #440), specified on other designs as well, and in the context of the Pacific proa's geometry had seemed particularly intriguing in its potentialities. Norwood's perspective certainly was encouraging.

Proas do indeed bring a different idea to the realm of sailing. Developed by indigenous people in parts of central/western Pacific as simple light craft for fast passages across atolls and between islands, the underlying principles of a proa are quite different and thus either baffling or intriguing to the minds of sailors familiar with conventional hull shapes and rigs symmetric on both sides. Put simply, a sailing proa never tacks or gybes, at least not on purpose. Instead of rotating the hull and rig to make good to windward, for instance, the same side of hulls, mast, and sail always face the wind.

Rather a proa shunts, meaning that it is brought to a dead stop during which adjustments to rig, rudder, and lateral plane are made that allow it to begin sailing in the reverse direction with same capability it just used sailing forward. Therefore, there is no dedicated stern or optimized bow shape. Instead of the symmetry along the centerline of the conventional sailing craft, the proa must be symmetric in terms of hull ends, rig function, rudder, and lateral plane action. If a proa is improved by making it able to tack, gybe, with purposed shaped efficient bow and stern, plus the usual locating of lateral plane and rudder, it is not a proa anymore but a catamaran.

Two types of proas are known for the last generation or two. With float and crew upwind from hull, mast, sail, and rudder, the original (by definition, Pacific) proa had always appealed with its minimalist approach, using just one skinny main hull supported by a smallish outrigger. The wind's heeling force would be compensated by crew weight and thus transferred into forward motion, with the much smaller and lighter float just being the



safety when sailing and for asymmetric but sufficient balance at rest.

The western invention of the so-called Atlantic proa is somewhat closer to a catamaran with two nearly or fully identical hulls, with the mast on the windward hull, and the lee hull taking all the heeling force as load until it is either submerged, the windward hull and mast are sent flying until the craft capsize, or just until mast breakage due to inherently inferior bracing opportunities. Serious back and forth between followers of both geometries have been fought out elsewhere. Perhaps best known is Dick Newicks' Atlantic proa *Cheers*, which came in third in an OSTAR right behind much larger monohulls. Here, on a daysailer at least, we'd stick with the Pacific proa, and we would call it a Bolger proa in light of its combination of unconventional details developed individually in a range of our designs across decades of work.

While Norwood had shown that the concept study as proposed in *BWOM* worked after a fashion, the rudder/lateral plane solution needed further thought; a Dutch interpretation of that study had broken one of the two brace assemblies ruining an afternoon's sail. Prodded by Norwood's proceedings, other inquiries, and our own interest to give this proa concept greater viability after this first confirmation of the basic idea, we decided to rework the overall concept while retaining the best ideas developed so far. A client in, of all places, Noumea on New Caledonia in the southwest Pacific, is eager to test this proposition.

Never specified in any detail on the cartoon was the fact that she obviously ought to be portable in pieces. Norwood did some fine detailing using bolts, reinforcements, and it seems even some higher end machining here and there. And he built a dedicated trailer to safely store and move her.

Bolger Proa 20 is fully assembled from a few large components consisting essentially of the hull with all sorts of things permanently and securely attached to it, the mast with its stays and shroud attached, the sail, two bridges, and the float. Assembly at the water's edge is supposed to be possible without any tools using self aligning geometries secured by big wooden toggles cum wingnuts to connect bridges to hull and float, plus snap hooks/snap shackles/turnbuckles for mast after its heel is dropped into its pocket, and for the sail.

She is unsinkable and has lots of in hull and in float stowage, some may venture to pitch a small tent across her bridges for overnighting. Some might think of doing the sarcophagus thing inside the hull, just once. Whether you hang a small outboard off it or just lock a yuloh into it, the outboard bracket is part of one of the bridges. Rudders, lateral plane, tiller, control lines, etc., remain attached to the hull.

For Bolger Proa 20 we wanted to keep the simple and affordable box shape of the hull matching typical plywood dimensions for reasonably efficient use of materials, but propose to make it faster using less overall rocker and a near straight run towards the ends. That was only defensible because we decided to unload her given forward end by putting her crew weight well abaft her midsection. This in turn was possible by using two bridges to connect hull to float. The exercise of shifting crew bottom during each shunting seems not

particularly demanding on a daysailer, and the proa's inherent disadvantage of never being able to optimize the hull's and the float's ends demanded at least some attempt at upgrading her speed potential.

Feet hooked under or pushing against the foot braces protruding fore and aft beyond each bridge, a reasonably smooth transition from one bridge to the other seems achievable, particularly since we added a sliding filler board between the two bridges, adjustable in and out to the available crew weight, the wind strength, and butt width; with two less ambitious crew, each can stretch out on their own 24" wide bridge and get to alternate between helm and sheet duty with each shunt.

Since the single tiller is amidships facing athwartships towards the float, and with crew facing in the direction of travel, this puts the tiller into the forward hand while the sail's sheet would be in the rear hand. With the foot braces under each bridge, moving crew weight in and out to balance wind force heel might call for little more than wearing slippery shorts complemented perhaps by a layer of nylon sheet screwed and countersunk on top of each bridge; the old school would have counseled "buckskin and butter," "Lederhosen und Schmalz!"

We also wanted to keep the Christmas Tree Rig with just some minor tweaks added. We picked a standard length industrial aluminum pipe for an untapered mast, eliminating up front manhours building her stick and able to counter that weight aloft by just a few crew butt inches towards the float. The mast would be supported with one shroud to the float and two stays towards the ends. With the mast in a socket off center towards the float, the angle of the stays became agreeable (for a proa) when anchored near the hull's outside edge.

While typically the sail would mostly stress the shroud to the float, the stays would help control bend and whip of the mast. And they would help some bracing the mast, should she get caught aback with sail pushing against the mast rather than pulling away from it, as is possible while rigging her on the beach, or being in monohull mindset afloat. These stays would also become the de facto fulcrum for the sail working in either direction, taking full advantage of the sail's balance area ahead of its downhaul point to introduce acceptable levels of coordination between its pull on sheet and downhaul, and lateral plane and rudder.

The lateral plane and rudder solutions of Bolger Proa 20 would be novel, though, as far as we know. Structurally we preferred a single leeboard amidship on the outside of the hull, while on either end stout rudder heads with retractable aluminum blades would balance the leeboard running on both bows.

On certain opportunities we like using leeboard geometries as they can solve lateral plane problems that might otherwise complicate if not ruin a concept. Here we may be the first to apply a leeboard to a proa's lee side. What is worse to some is the fact that it can on demand travel 360 degrees for convenience of handling her in shallow water, on the beach, or the trailer. Under sail it would remain mostly upright, but controllable on the fly through 170+ degrees by two lines run to the tiller. This allows crew to get her hung

just right on a given course, or induce if deemed favorable varying degrees of weather or lee helm, or just get the board upright before barreling up the beach. Whether we'd pull it up aft, as is the convention, or ahead in anticipation of a relaunch into the same wind direction, is up to our levels of mania, guts, and proa correct reflexes.

The alternative would take a moment's patience rotating the board up over and now aft (again) 180 degrees after disconnecting the two leeboard control lines to then reattach them again. Should the forward retraction of the board give grief in terms of likely water squirts, or with crew being too slow on the uphaul, risk inadvertent leeboard hop induced bouncing of the whole craft no pain, no gain. We made the board extra stout and supported it by a full beam pivot pin for extra meat until we got it right. Still we'd rather not make her jump over the leeboard. The Christmas Tree rig certainly seems perfectly suited to be paired with one leeboard as the board's variable center of lateral plane can move quite a bit fore and aft or better put in proa talk, in either direction, to match any course and wind strength.

Very stout as well in their structural supports are her two end hung rudders. The geometry does only allow a conventional tail hung rudder geometry, since an unbalanced forward facing blade would seem an intriguing idea but very quickly become uncontrollable before it breaks something in its mounts, stops, and controls. As mentioned in last issue's description of the original concept study, that proa did steer with her forward rudder, locking the rear unit as lateral plane, but that rudder geometry was always pivoting in more or less conventional fashion, with its area abaft that point.

Here on the Bolger Proa 20 we raise the forward facing blade through an arc of over 120 degrees, lifting it out of the water well over most waves while impressing hesitant loiterers in her path; dramatic rudder blade art would add graphically to its visual stimulus. Since the blades are interconnected, they balance each other's weight, allowing directional deployment with modest input on the tiller controls as well.

The tiller is quite different from the original concept published long ago. Norwood proved that the original cartoon's two stick rudder/lateral plane control geometry worked agreeably enough. But we wanted to do away with fragile and wet/craggy asymmetric rudder mounts extending inboard from the hull, and also needed to concentrate controls on and near the helm.

Hanging rudders in a strong and low drag position on her ends, a simple yoke on the rudder head geometry allows for wire/no stretch rope criss cross connection between each rudder. Once the forward rudder's blade is lifted clear off the water, keeping both rudder heads permanently connected is no liability, but rather a welcome simplification. As mentioned above, both aluminum blades weigh quite a bit, but balance each other as one is up while the other one is down. To get them both up, such as over shallows or on the beach, we'd yank hard at the big toggle of the dedicated lift line that pulls up the full weight of both blades via a loose block on one connection wire; sitting on the bridge and using our legs against the footbraces should

make this lifting action swift and certain, with that line secured by a cam cleat.

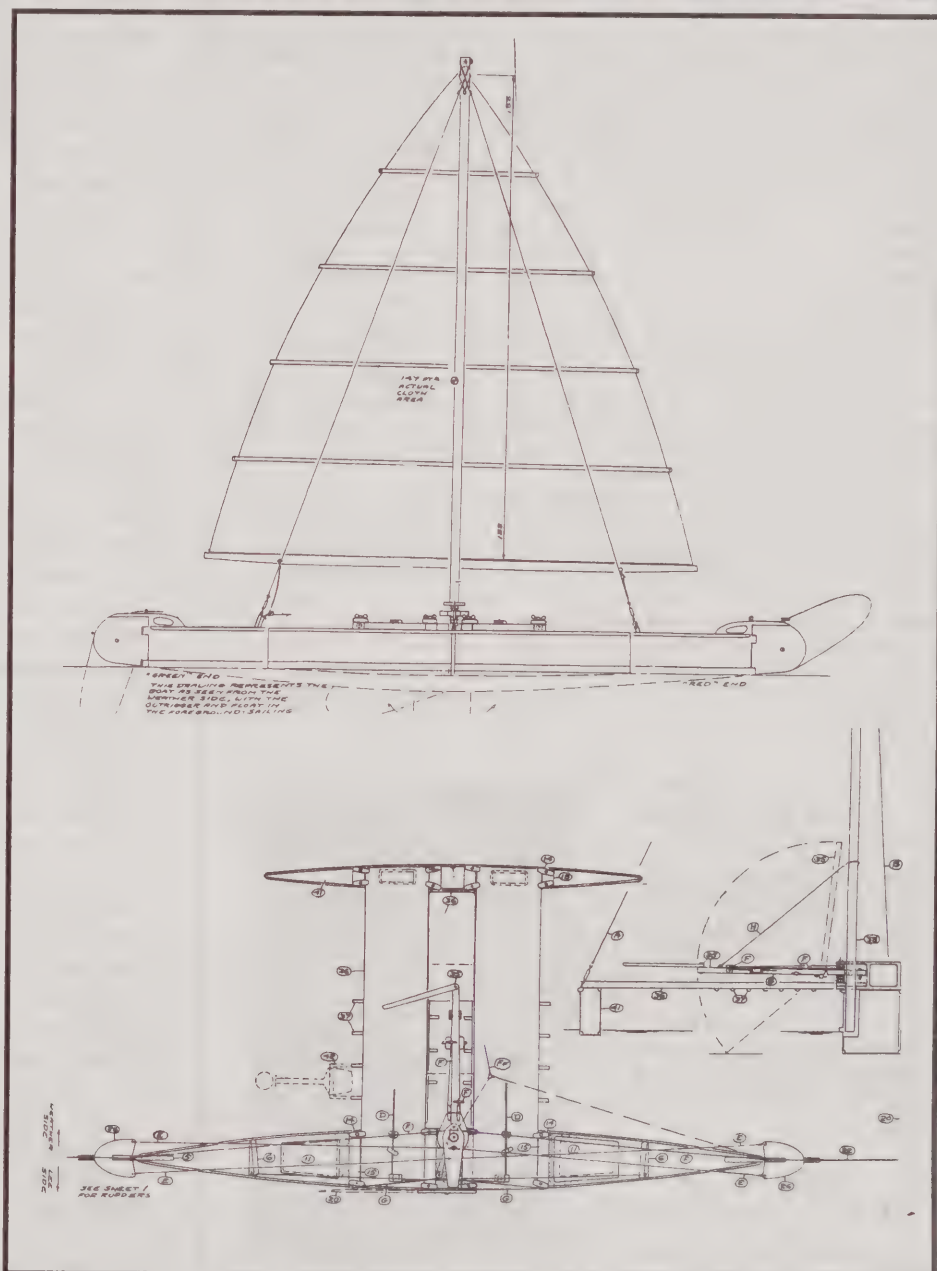
With the permanent two wire linkage between rudders, adding a quadrant on the backside of the tiller opens up another welcome opportunity. With modest rudder area on this light daysailer we were able to gear up the tiller to rudder movement 1:1.5, using limited tiller input to get adequate rudder travel on the ends; 30 degrees on the helm will yield 45 degrees on the rudder, matching the more limited space available on the bridges. Gearing can of course be adjusted to taste by changing quadrant radius after initial trials.

The tiller itself is pivoted inboard of the mast, mounted to the inboard side of the hull (note the proper proa talk). With a slot cut into the tiller quadrant to match the arc of the mast protruding through it, this geometry makes bringing in rudder and leeboard control lines a modest challenge with fewest blocks necessary. We took the pivot pin of the tiller to stack one pair of sheaves below and one pair above the tiller quadrant. The lower pair routes the leeboard control line up the hinged tiller while the upper pair brings the endless rudder blade control line within immediate helm reach. Clutches or jam/cam cleats control the lines particular position. The pivot assembly and component size should be adequate to the stresses of controlling the rudder blades and the leeboard.

The tiller itself is hinged upwards and downwards, with the latter to allow it to drop into the sand on the beach while she is being rigged. Whether we buy a stock tiller extension off the shelf or build our own to match our preferences is up to us. We propose to suspend the completed tiller assembly via a bungee cord hooked into a pad eye on the inboard face of the mast; actual weight of tiller and controls on it will determine the tension needed on that bungee to more or less level the tiller for best ergonomics under sail.

Finally, the sail and its controls are rather simple. The sail is symmetric and given a predetermined curvature typical of this rig using built in pre-bent battens. It is raised by a single halyard and controlled by...proa talk...two downhauls/sheets, i.e., two identical lines doing different duty depending on whether we run on the red or the green bow; not shown but obvious options are conventional reef points on each of the two lower battens to be put in the usual fashion. The curved boom is of course symmetrical as well with the downhaul/sheet haul attached about one sixth its length inwards from either end. And this is where using the Christmas Tree really shows its advantages on a proa. We'd sailed it successfully on one of our monohulls in the '80s and, as discussed in the last issue, Joe Norwood confirmed our reasoning for its particularly promising match on a proa a while back.

Photos of his rendition of our concept study show though, that there was still more to be done to make the rig stand well for most drive on all points. As mentioned above the mast is a sturdy untapered aluminum pipe, stayed better than the original cartoon, with one shroud over to the float and two stays to about 80 percent hull length either way. This allowed us first a better spread for those stays as they are well off centerline, unlike Norwood's apparent connections to the stem heads. And second, equally important in our



eyes, a bigger sail area per given mast height, since the sail would not have to be within the area constricted by stays to the stemheads. With a lower aspect ratio we got 147sf versus the cartoon's 95sf. The combination of (hopefully) faster hull shape, better support of the mast, lots of bridge area and distance to hike out a lot of crew weight, and the additional 50sf feet of cloth should be welcome on a reasonably athletic beaching day sailer.

So, how do we control the sail? First off, the full length battens civilize that much sail area. Our experience on the monohull showed it to weathercock unexpectedly well, with its curvature not giving any problems. In fact, we came to regard the curvature as preloading the cloth's leading edge(s) giving it relative steadiness without a mast in front of it, as typical of conventional Bermudan battened mainsails. Obviously there is some drag in that preloading, but not enough for purposes of that monohull and this Bolger Proa to be of serious concern. In a blow, we'd reef anyway, and in a nasty blow few folks go daysailing.

Secondly, as the shunting diagram shows, sailing on the green bow the sail's leading edge is pulled tight by the 1/2" down haul. It is routed to the rear bridge base to be hauled down hard using leg muscles against braces together with a firm grip through gloves to lock in the highest attainable tension into the cam cleat on top of that bridge; only then would we haul in the sheet for maximum drive. Routing the green bow's downhaul to the rear bridge where the crew rides allows most power to be exerted by its legs, back and arms. This in turn means that the sheet is routed to the forward bridge.

Since the sail has a good amount of balance area built into it, the strain on the sheet is moderated, making the odd angle of pull much less of an issue. Furthermore the angle is unavoidable since, after the shunting, when on the red bow, the high tension downhaul of a moment ago has become the looser sheet, while the old sheet is now in charge of keeping the leading edge tight. No doubt at the end of a long day of sailing her, our primary hand will feel the many instances of one turn around its fist for maximum pull on the respective down haul.

Sailing her sure is different. Running before the wind, we want to keep her course to a reasonable angle not to test our and her gybing prowess. Most of us are sensitive to the potentialities of uncontrolled gybing anyway. Here you don't even think about it. Reaching and going upwind she should feel like most boats except there is no need for a trapeze to get our weight many feet out from the hull. To shunt, we feather the sail, depower her, to let her come to a stop. Depending on wind strength, crew weight, and our expertise handling her, we will take our deliberate time to get it just right while sitting safely way out on the bridge, or not even think about anything anymore as we complete the sequence except for aiming for most rapid change of direction to beat our competition.

Near standstill we lower the green rudder blade, lifting the red blade with the tiller mounted control lines. Then we yank the tight downhaul out of its cam cleat, while hauling in on the sheet that will now serve as the downhaul until it is tight. Finally we take in the new sheet to power her off on the new course. Under certain conditions a minor adjustment of the leeboard will be possible in conjunction with a slight luffing to get her hung just so. Well experienced crew will try to cut the time of shunting by forcefully braking her through backing the sail onto the new bow, before shifting the rudder blades and our butt from one to the other bridge.

We'd practice far away from the public, but the successful results should really be intriguing, as the overall motion of her alone or a regatta of sisterships would be unseen of. No other day sailing craft can brake on demand to evade a sudden obstacle or pop into and out of dead ends that are literally narrower than she is long. Whether you awe conventional boaters as you cut through their wake or strategize your approach to the race course it should have high entertainment value for all.

Some Proa Talk

With proas being symmetric fore and aft rather than from port to starboard, the language of referring to and using a proa is different as well. Simplifying the language should help overcome the counterintuitive references necessary for talking Pacific proa.

First off, we'll refer to its three principal hull components as just the hull, the bridge, and the float. Desirability of anthropological precision notwithstanding, western homogenization of indigenous terms used across tens of thousands of square miles and various tribal territories is likely as arbitrary as using plain descriptive terms.

Second, we call the hull's side toward the float the inboard side, etc.

Next, which end do we call what? She is ambidextrous after all! Even though she does not tack or gybe, we propose to use the Western context of port and starboard and therefore its associated colors of red and green. Since we always sit on the windward side of hull and sail and facing them, sailing to our left we will call being on the red bow, while going to our right will be called being on the green bow. Sounds intuitive enough.

While the 2hp Honda referred to as get home power is shown pushing her along on the red bow, implying a decidedly conventional notion of calling the red end the bow, its 360 degree swiveling geometry will actually work - proa correct in both directions. In light of that unit's available 20" shaft, necessary here by the height of its mount off the rear of the green bridge, and since its location is many feet inwards from either hull end, it should not be at serious risk of swamping if as a matter of circumstances it is used running on the green bow.

And, again, shunting means that the proa is brought to a dead stop during which adjustments to rig, rudder, and lateral plane are made that allow it to now begin sailing in the reverse direction.

Now imagine a play-by-play account of a proa championship in correct proa talk. Or just picture ourselves, used to regular mono hull/catamaran maneuvering and reflexes, trying to really understand what she can and cannot do and how we'd keep her and ourselves out of trouble as we zip through the summer anchorage. If we really get good at this, we'll try a full wind powered dead stop by rapidly manipulating this de facto square rig's capability to brake the craft. They used to do this even with five masted square riggers.

Plans for Bolger Proa 20, Design #664, are available only from us for U.S. \$100 postpaid rolled in a tube. Phil Bolger & Friends, P.O. Box 1209, Gloucester, MA 01930-1627.

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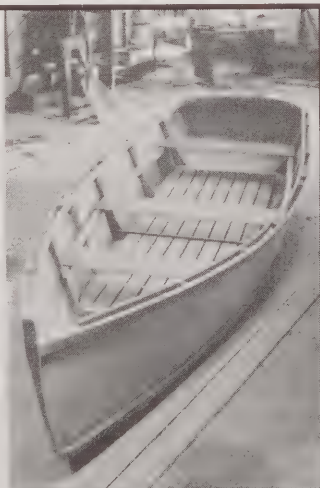
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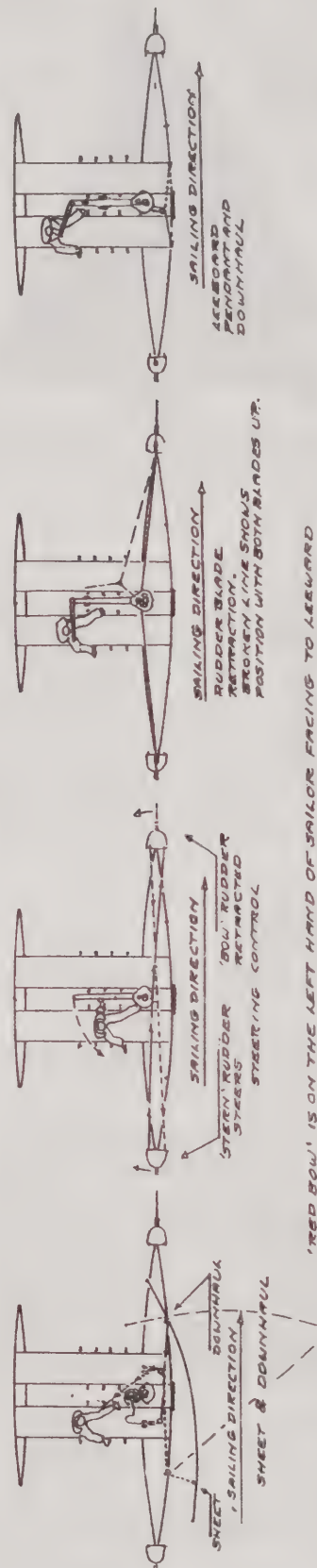
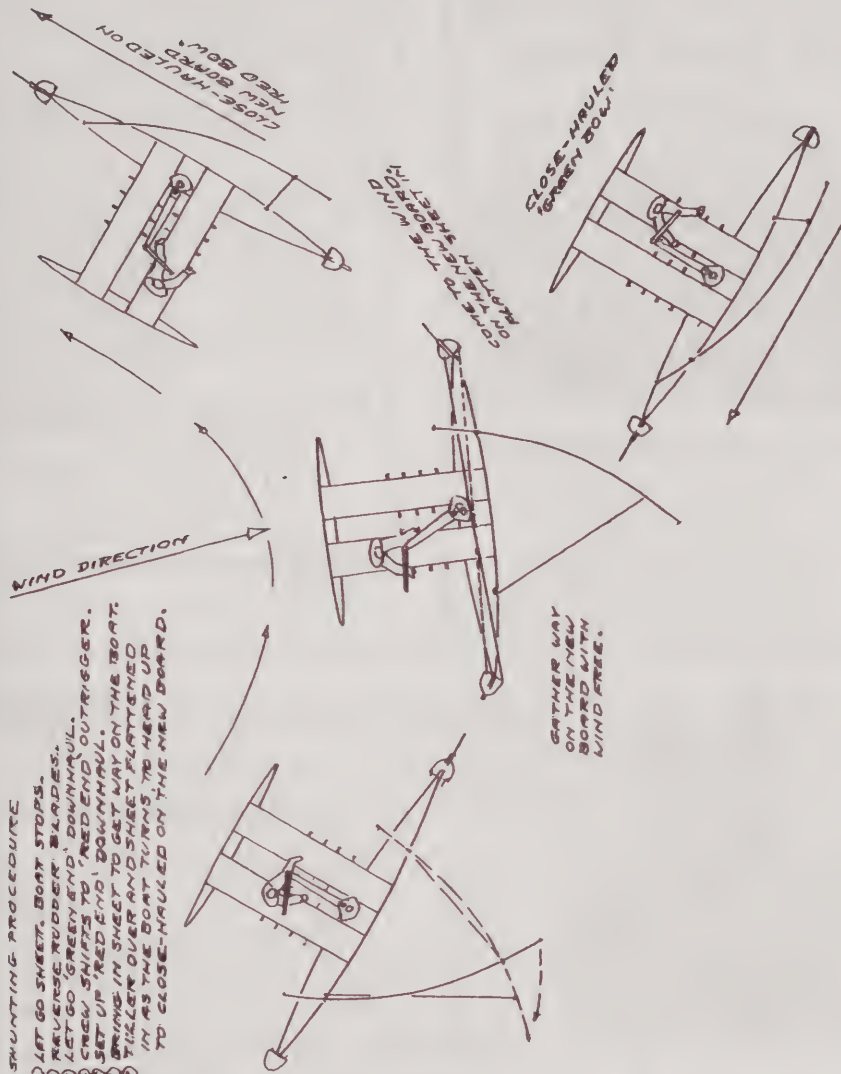
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SHUNTING PROCEDURE

- 1 LET GO SHEET. BOAT STOPS.
- 2 REVERSE RUDDER BLADES.
- 3 LET GO GREEN END, DOWNHAUL.
- 4 CLOSE SHEET, DOWNHAUL.
- 5 SET UP 'RED END', DOWNHAUL.
- 6 BRING IN SHEET TO GET WAY ON THE BOAT.
- 7 TRIPLET OVER AND SHEET FLATTENED UP.
- 8 IN AS THE BOAT TURNS TO HEAD UP TO CLOSE-HAULED ON THE NEW BOARD.



'RED BOW' IS ON THE LEFT HAND OF SAILOR FACING TO LEeward

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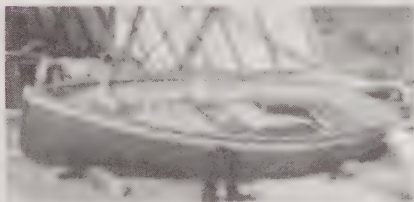
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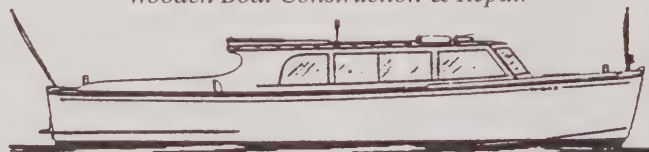
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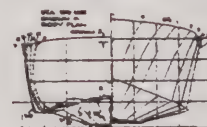


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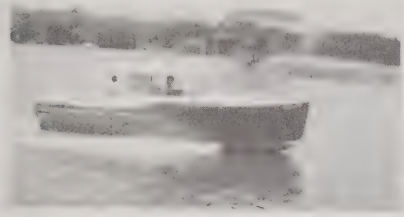


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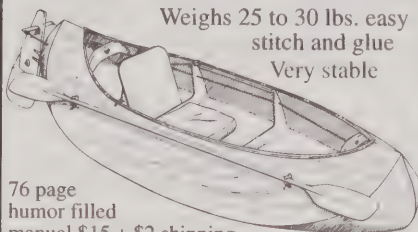
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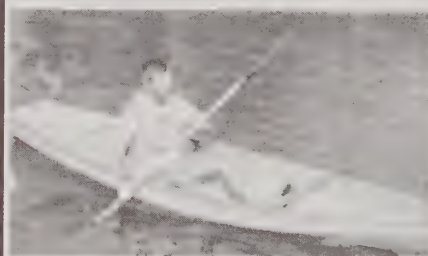
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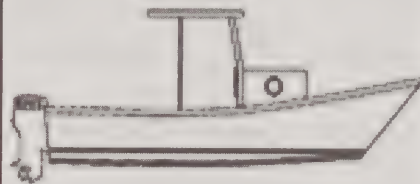
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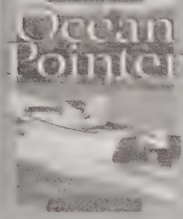
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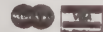


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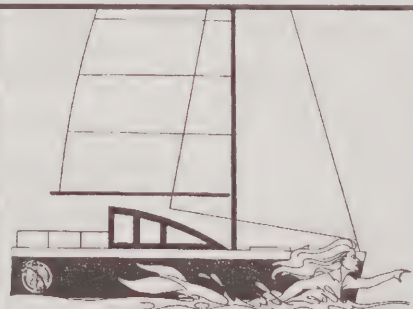
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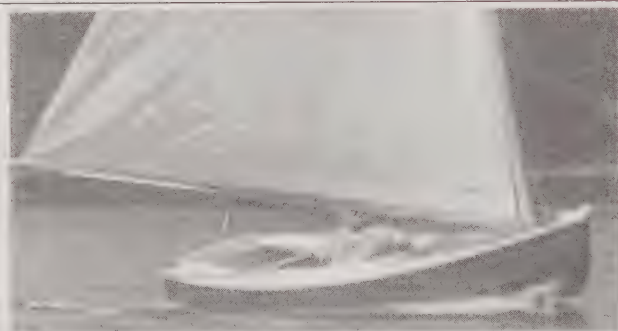
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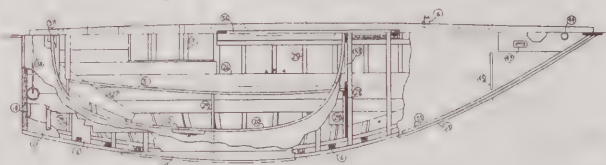
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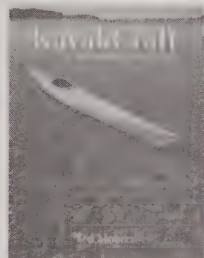
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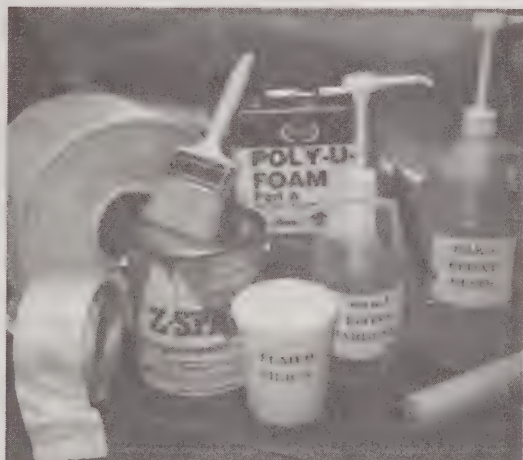
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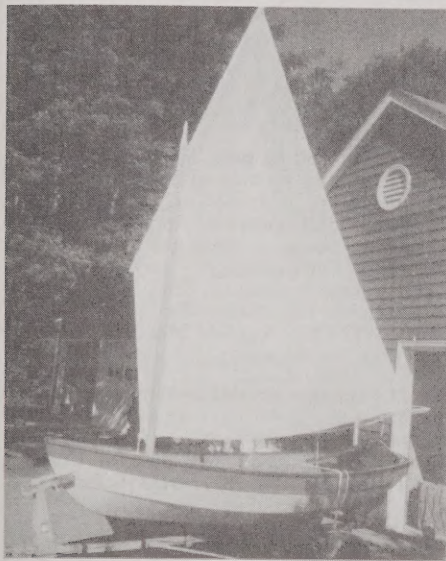
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- Ph/fax 804-580-8723
- PO Box 235, Wicomico Ch., VA 22579

Stuart K. Hopkins, Sole Prop



Classified Marketplace

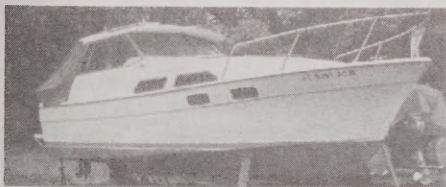
BOATS FOR SALE



11' Shellback Dinghy, Joel White's classic design. Mint cond. gear, sail, spoon oars. Reconditioned trlr. \$2,750.
H.K. MURDOCK, Colchester, VT, (802) 864-7715. (6)

1931 Klepper Frame, 16' 2-seater folding kayak w/paddles, sailing rig, carrying bags & boat cart. \$450.
LEONARD SATZ, Blackwood, NJ, (856) 227-5886. (6)

18' Lyman Islander, '54? 75hp Graymarine IB, 2 sidemount steering whls. Gd user boat or nice start for classic rebld. New Load-Rite trlr. \$5,000.
ROB FINNIN, Silver Spring, MD, (301) 593-8862, please lv message. (6)



26' Bayliner Explorer, '80 fully restored & repowered. Lovingly maintained. Pilot house cabin cruiser w/semi displacement hull that cruises best @ 12-15mph @ a comfortable 1,800-2,200rpm. Beam 8', weight 5500lbs. Repowered w/new 190hp 4.3 liter V6 Mercruiser & new Mercruiser Alpha outdrive. Both have 90 hrs. New controls, gauges, 50gal gas tank, electrical system, batteries & cables, shore power system & breaker panel, hot water heater, pressurized water pump, bilge pump & blower, interior cushions & paneling, helm seat and side bench cushion. 2 burner electric/alcohol stove, electric refrigerator. Stand up head w/shower. Full cockpit mooring cover. Sleeps 5 in V berth, starboard berth & aft cabin. Digital depth sounder, Garmin GPS, Horizon Standard VHF. Extra prop. Teak & holly cabin sole. Teak restored & sealed w/Cetol. Barrier coated bottom & trim tabs. 2 Danforth anchors & rode. Winter cover & frame. Fuel consumption approx. 3gal/hr @ 2200rpm. Windows & ports resealed. Orig gelcoat in exc shape. Home location change from Long Island Sound to inland lake reluctantly forces sale. Asking \$16,000.
BOB GROESCHNER, New Milford, CT, (860) 354 8048, <karamaru@earthlink.net> (6)

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Classified ads are **FREE TO SUBSCRIBERS** for personally owned boat related items. Each ad will automatically appear in two consecutive issues. Further publication of any ad may be had on request.

A one-time charge of \$8 will be made for any photograph included with any ad to cover the cost to us of the necessary halftone. For return of photo following publication, include a self-addressed stamped envelope.

Non-subscribers and commercial businesses may purchase classified ads at \$.25 per word per issue. To assure accuracy, please type or print your ad copy clearly. Mail to *Boats*, 29 Burley St., Wenham, MA 01984. No telephone ads please.



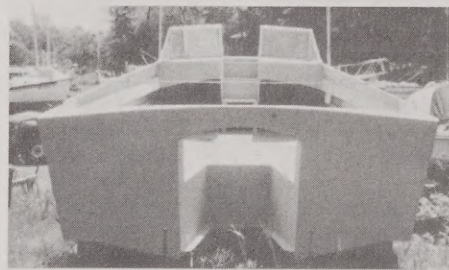
Acorn Dinghy, attractive 10'2" traditional design by Ian Oughtred. Blt '02 using 6mm marine ply & West System (tm) epoxy. White painted hull w/ teal interior & mahogany trim finished w/Cetol. \$1,750.

LARRY DOW, Eliot, ME, (207) 439-8488, <sailse32@aol.com> (6)

18-1/2' Guide Model Wood/Canvas Canoe, gd cond. \$1,000. **16' Morris Wood Canvas Canoe**, gd cond. \$1,000. **12' Wood/Canvas Canoe**, gd cond. \$300. **25' '26 Old Town War Canoe**, gd cond. \$3,000. **Old Town Sliding Seat**, w/Old Town spoon oars. **13-1/2' Pintail Sailboat**, mooring cover, trlr. Gd cond. \$2,000.
GEORGE HASELTINE, 1240 Main St., Haverhill, MA 01830-1431, (978) 372-3417, (603) 253-7089, <GennieRose@webtv.net> (6)



Saroca 16' Sailing Canoe, row or paddle as well. Tlr include. Both in gd cond. Owner in 70s, not in nimble cond. Boat in W. Falmouth, MA, owner in ME. \$950 OBO.
CHARLEY JONES, ME, (207) 784-2721. (6)

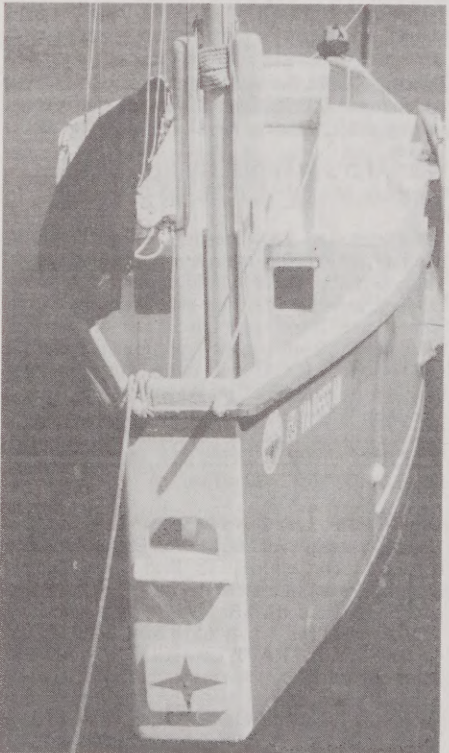


18' Former Patrol Boat, hvy guage welded alum, at mere fraction of replacement cost. \$5,000.
FERNALD'S, Rt.1A, Newbury, MA, (978) 465-0312. (6)

Double Kayak, epoxy FG composite. Western red cedar strips w/oak keel & gunwales. Darryl Graves designed as a "Fast, seaworthy double for long distance paddling", it has also served as a very stable first kayak for our family. Exc cond, lightly used. Dimensions 19' x 25", 75lbs. \$1,500 OBO. Photos @ www.vermontel.net/~tscody. Located southern Vermont.
TED CODY, Springfield, VT, (802) 885 8226. (6)

27' St. Pierre Dory Hull, FG, never been in water. Stored undercover in NW VT next to Lake Champlain. Same lines as widened model in John Gardner's *Dory Book*, pg 162. \$2,500.
JON KNUDSON, Alburg, VT, (802) 796-3050, <jknud@surfglobal.net> (6)

11' Sid-Craft Hydroplane. \$225. **Model Jersey Speedskiff, 33"**. \$200.
ROBERT O'NEILL, Brick, NJ, (732) 477-1107. (6P)



Martha Jane, '93 Bolger sharpie in VA, 23'6", 7" draft, grt cond, weatherly, perfectly balanced, sails original but vy well cut & in fine cond, roomy, firmly self righting, water ballasted (removable tank tops), aluminum mainmast, OB bracket allows open transom for swimmers, trlr new in '00. Many more upgrades. Serious inquiries only: \$5,500.
ED HAILE, Champlain, VA, (804) 443 4813. (6)



Micro, Bolger's classic, exc cond. Beefed up scantlings, bronze fastenings w/vf SS & bronze hrdwre. Ritchie Helmsman, 3 anchors include Bruce w/exc gnd tackle, 10 hrs 3.5 Tohatsu, much bright wk. 2 bunks w/Herreshoff backrests, shelves & many extras. Out of water in RI boatyard w/ launching, dockage & insur fees pd for season. \$5,000.

ERIC SCHOONOVER, Gloucester, MA, (978) 281-6538, <tuva@cove.com> (6)

11' 6" Penguin #8802, wood. Blt late '60's?. Fully refurbished. Exc trainer, grt for 1 or 2 adults. Enormous racing class, favorite for frostbiting. Fitted cover. \$750. Can deliver ME to MD. JEFF HILLIER, North Hampton, NH, (603) 964-5074, <jfhillier@aol.com> (7)

Boreal Design & Wilderness Systems Kayaks, we are now new regional dealer. Still dealer for Old Town canoes & kayaks going back over 50 years! Hundreds are on display at our store. FERNALD'S MARINE, Rt. 1A (at Parker River), Newbury, MA 01951, (978) 465-0312 (TFP)

Rowing Shells, Fernald's Marine now dealer for Alden rowing shells. Over 57 years selling rowing, sailing craft, canoes, kayaks & skiffs at River Parker. FERNALD'S MARINE, 291 High Rd. (Rte 1A), Newbury, MA 01951, (978) 465-0312.(TFP)

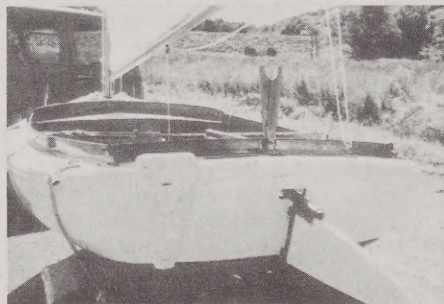
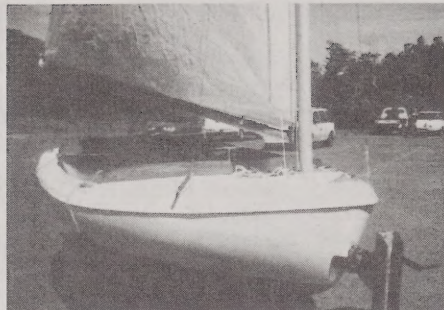
'88 Quickstep 24, 4 berths, set up for single handing, jiffy reefing main & roller furling jib. '98 Yamaha 8.8hp. Head w/holding tank & Y valve. Dodger, awning w/zip-on side curtains. Stove, icebox, sink, 20gal water tank. 2 anchors w/rodes, solar panel, depth sounder/speedometer, Garmin GPO-48 GPS, ICOM M1+ radio, Autohelm 2000 tiller-acting autopilot. '00 Walker Bay 8' dinghy. Dor-Mor 375# mooring anchor w/stainless chain/shackles/swivel. Located on Cape Cod. \$14,000. WARREN SHERBURNE, NH, (603) 863-6394 home, (603) 865-2480 office. (6)

18' LFH Buzzards Bay 14, '95, '45 LFH stretched 12-1/2. Awlgrip over FG. Micron Extra over i3000 barrier. Much Cetoled teak. Fish Class cuddy. 3 Hood sails, boom tent, dodger, sail covers, travel cover. '95 Triad trlr/SBs. '95 3.5hp Yamaha 2S. 12v/24v elect sys. w/24v 65lb Minnkota. \$28K. GEORGE HAYCRAFT, Louisville, KY, (502) 426 0419. (6)

14' Wood & Canvas Open Maine Guide Boat & Trailer, Exc cond, completely refurbished '02. \$1,500 for both. TOM or ELLEN LAROSE, Framingham, MA, (508) 877 3245. (7)

21' Fenwick Williams Catboat, '65, cedar on oak, bronze fastened. Laid teak decks & cockpit, new bunks, sole & lockers below. Volvo 16hp Diesel rblt. VHF, exc sail, gd cond. \$16,000. W. MURPHY, Kingston, NH, (603) 642-7489. (6)

38



18' Penn Yan Canoe, '54, FG over original cedar, vy gd cond. \$950/OBRO cash. **BB Swan**, '48, 12'4"L x 6'W. FG w/wood trim, all orig, exc cond. \$1,850 OBRO cash. **16' Catboat**, hull only, 6' beam, FG over cedar. 80% compl. Would make a nice launch., \$300 cash. LEON POTHIER, Westfield, MA, (413) 562-2216. (7)

1968 Pearson Triton, 28 1/2' FG sloop, no engine, Carl Alberg design, steel cradle. Best Offer. JOHN GIULIETTI, Vernon, CT, (860) 643 7075, <waterguy@attbi.com> (7)



'59 Lyman 19, rblt 109 Gray Marine, Shorelander trlr. \$1,500. THOMAS SMEREKA, Grosse Isle, MI, (734) 676-4169. (6)



25' Sailboat, '20s, highly restorable but will take lots of work. Believed to be a Morton Johnson blt Chas. Mower design. Stored in barn in MD for 53 yrs. Has most parts. Sails & cushions available for patterns only. Located in FL now. Any reasonable offer accepted. Sitting on friend's trlr which can be purchased for \$1,200. Boat may be bought separately. JIM SAUERS, Port Orange, FL, (386) 787-4888 eves. (6)



Stonington Pulling Boat, single/double sliding seat, 16' Kevlar re-inforced ltwt hull (80lbs) w/ teak trim & bronze fittings, w/2 compl Piantadosi Ro-Wing sliding seat units. Surprisingly fast & dry w/room for cooler, camping gear, etc. Stern seat allows bow facing passenger w/single rigger in fwd position. Lightly used, exc cond. \$2,950. \$3,500 w/2 pr carbon fiber shaft sculls.

JOHN SPENCER, Topsfield, MA, (978) 561-1182, <jkspencer@attbi.com> (7)

13 1/2' Chamberlain Rowing/Sailing Skiff, Sprit sailing rig like new. Hull in vy gd shape. No trlr. \$1,100.

ROGER SHERMAN, 5588 E. Lake Rd., Conesus, NY 14435, (585) 346 9871, <res356c@aol.com> (7)

'81 AMF Trac 14 Catamaran, easy to sail & fast for 1 or 2 people, light weight, FG, multicolored main & jib (sail area 150sf total), ready to go, hulls fold to make it narrower for trailering. \$800. **11.5' Bolger Dart**, unique boat, front position CB, 75sf spritsail, written up in "Boats With an Open Mind. \$400. Can deliver within 75 miles.

HERB HUCKINS, Loudon, NH, (603) 267 7285. (7)



21' Sea Pearl, '88, sail w/wo proa port hull, easy demountable, fast as the tri version. Evinrude 2.5, trlr, all equipment. Gd cond. \$3,600. HOWARD SCHAFFER, Stuart, FL, (772) 225-3812. (7)

Bristol Blue Fish, ME blt at Allen Quimby in Bingham. Open utility, center steering. 55hp Johnson motor on tilt trlr. Little use, always garaged. Exc cond. \$2,500. RALPH EATON, Shrewsbury, MA, (508) 842-6239. (7)

BOATS WANTED

Carbon Spars, Poles, Gaffs, Tiller Extenders, sections available for Cat Boats, Sea Pearls, Hens, Birdwatchers & other Bolger designs. If you need a new spar for a custom boat or a replacement spar for a current design, give us a call for a quotation, you may be surprised. Aerospace quality construction at affordable prices. New Bedford, MA, (508) 991-4828, www.forterts.com.(7P)

O'Day Widgeon Sailboat.
 GEORGE HAUX, Skaneateles, NY, (315) 685-6222, <hau@localnet.com> (6)

SAILS & RIGGING FOR SALE

Cape Dory 14 Sail, orig red & white striped, gd for pattern. \$14.
 STEVEN ROSSI, East Haddam, CT, (860) 873-2999. (6)



Spinnaker, 260sf, red, white, blue nylon w/pole, shoot scoop launching/retrieving system. Exc cond. \$400 cash. **New Tanbark Gaff Rig Sail**, 125sf, w/alum spars. \$975 OBRO cash. **Marconi Rig Sail**, 17'6" x 8'6" approx 86sf, no spars, used. \$45 cash.
 LEON POTHIER, Westfield, MA, (413) 562-2216. (7)

GEAR FOR SALE

8" Cherrywood Deck Cleats, 1 pr, SS hrdwre. \$25pp.
 FRED WINTERS, P.O. Box 494, Caledonia, MI 49316. (7)

"Life's Too Short To Own An Ugly Boat" Bumper Sticker, \$2.00 ea, add \$1 postage for up to 20. Call for prices on T Shirts & Coffee Mugs too!
 SOUTHPORT ISLAND MARINE, P.O. Box 320, Southport, ME 04576, (207) 633-6009, www.southportislandmarine.com. (TFP)

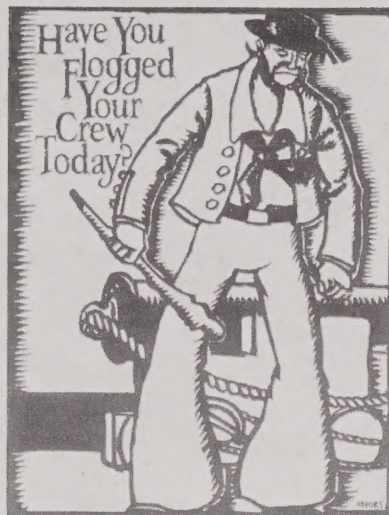
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A Tough Jacktar, holding his billy stick (18th C. British sailor) is featured on this T-shirt. Dramatic woodcut printed on an Ash Grey shirt. The words say it all! Perfect gift for any sailor, rower, or old salt! Medium-X large \$17.00, XXL \$19.00, S&H \$4.50 in North America. We accept Visa, Master Card & American Express.
 NORS, P.O. Box 143, Woolwich, ME 04579 USA, (207) 985-6134, Fax (207) 985-7633, <crew@norsgear.com> www.norsgear.com (TFP)

17' Canoe Building Mold, for building Prospector like cedar & canvas canoes in traditional fashion. Galv bands where ribs are bent. Mold constructed around '87. 1 canoe was built on it. Working height dolly incl. Located in Centre Harbor, NH, at Lake Winnepesaukee. Boat trlr best for transport. \$200 or reasonable offer. **12' Canoe Building Mold**, for building vy small cedar & canvas canoes in traditional fashion. Galv bands where the ribs are bent. Mold was constructed in '94. 4 canoes were built on it. Working height dolly incl. Located in Prides Crossing, MA. \$200, or reasonable offer. **Cockpit Cover**, for Herreshoff/Haven 12-1/2. Canvas, never used. \$100.
 JOHN FISKE, Prides Crossing, MA, (978) 921-5220, <johnfiske@attbi.com> (6)

X Oarcizer, converts an Alden OarMaster I drop in rowing unit for indoor workouts. Hydraulic pistons fit on outriggers and accept 3' aluminum stub "oars". \$75 plus shipping. **Wee Lassie Building Form**, \$50.
 BOB KUGLER, Westport, MA, (508) 636-2236, <kugler@optonline.net> (7)

Ritchie CB 50 Chart Board, free to good home, yours for shipping & handling charges only.
 BOB HANSEN, Chicago, IL, (773) 549-7911. (7)

Vintage OBs, parts, controls.
 ROBERT O'NEILL, Brick, NJ, (732) 477-1107. (6P)

Ryobi 10" Planer, 1/2hr use in perf cond. Bench & accessories include. Moving, must sell. No reasonable offer refused. Worth at least \$200. **5/8" SailTrack**, 29' w/16 slides. \$20. **1/3hp Motor**. \$3. **15sf Mahogany**, 1" thick. \$10. 8"x5:" Straight Line Sander, \$2. OBO on all items.
 JOE ROGERS, Framingham, MA, (508) 872-4206. (7)

GEAR WANTED

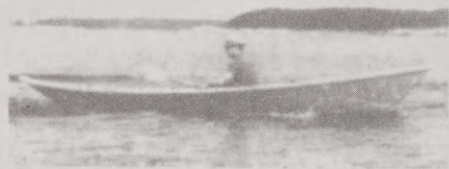
Yanmar Diesel Engines, dead or alive for parts or repair. 1,2,3 cyls.
 JOHN WHEBLE, Kingsrton, MA, (781) 585-6962. (7)

BOOKS & PLANS FOR SALE

BOAT PLANS & KITS - WWW.GLEN-L.COM: Customer photos, **FREE** how-to information, online catalog. Or send \$9.95 for 216-PAGE DESIGN BOOK, includes **FREE** Supplies catalog. Over 240 proven designs, 7'-55'. "How To Use Epoxy" manual \$2.00.
 GLEN-L, Box 1804MA33, 9152 Rosecrans, Bellflower, CA 90707-1804, 562-630-6258 www.Glen-L.com (TFP)



Nutmeg (aka \$200 Sailboat), Bolger design, 15'6"x4'6". Plans w/compl directions. \$20.
 DAVE CARNELL, 322 Pages Creek Dr., Wilmington, NC 28411, <davecarnell@att.net> (TFP)



Dory Plans, row, power & sail. 30 designs 8'-30'. Send \$3 for study packet.
 DOWN EAST DORIES, Dept. MB, Pleasant Beach Rd., S. Thomaston, ME 04858. (TF)

"Sleeper", 7'10" car topable sailing cruiser. Slps 2 below deck. Plans \$37, info \$3.
 EPOCH PRESS, 186 Almonte Blvd., Mill Valley, CA 94941 (TFP)

Magazines, *Rusty Rudder/Rudder* winter '90 to present, 43 issues \$50 plus shipping. *The Brass Bell*, winter '89 to present, 41 issues \$50 plus shipping. *WoodenBoat* #52 \$6, and 30 issues starting with #136 to present \$30 plus shipping. *Boat Design Quarterly* #8 \$8. *Classic Boating* compl set \$250 plus shipping.
 ROY ROYAL, Columbus, MI, (313) 390-6444 work, (586) 727-7320 home, <rroyal@ford.com> (6)

MISCELLANEOUS MARINE RELATED FOR SALE

www.kleppers.org. (TFP)

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 Contact: Robert/Jean Bloom DeTour Village, MI, 49715 (906) 297-6105 or

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Just enjoy and take it all in, even in the snow! Bradley Lake, Andover, N.H. Photo: Brownell

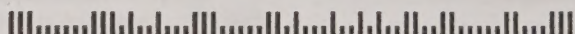
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